

Sound Mind, Sound Body

A healthy school is one in which every member of the community is encouraged and supported to realize her or his maximum potential to be good and to do good in the world. Such encouragement and support are vital both to the welfare of the individual and the welfare of society. How does this apply to elementary educators of math, science and technology?

A remedial mathematics teacher from Florida spoke with me and said that despairing, after a number of weeks, of ever getting any homework from one particular student, he informed the student that he would have to speak with his parents. “Good luck,” was the student’s response. “I haven’t seen them in three days.” Schools are now truly *in loco parentis*: providing pre-school programs and after-school programs; serving meals, sometimes the only ones a child will eat that day; dispensing medications; mediating between siblings and between families.

Across the nation, educators are rising to the challenges of mentoring our young and improving their well being. They are finding ways to meet physiological needs, needs for safety and security, for love and belonging, and for esteem; so that students can find a key to happiness that in John Dewey’s phrase is, “... to find out what one is fitted to do, and to secure an opportunity to do it.”

A gentleman in his seventies vividly recalled to me the poem celebrating language that was embossed on the retaining band of each pack of writing paper that he received as a young child: “Anima Sana in Corpore Sano.” The articles in this issue of **Connect** reflect a variety of initiatives that support that motto, “A sound mind in a sound body.” —BOB FINKEL, *Guest Editor*

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An Opportunity Every Day

by Heather Taylor

Many diseases progress over the course of a lifetime and have their roots established early in life, as one develops a lifestyle and learns to make informed choices. This means that as K-8 educators, we have a tremendous opportunity early on to encourage the patterns of living that cultivate better health.

News headlines frequently tell of serious concerns for the declining health of our nation's population, in particular, our children. For instance, the statistical sourcebook, *A Nation at Risk: Obesity in the United States* (2004), states:

According to CDC statistics, of children born in the United States in 2000, the following are likely to develop diabetes [resulting mostly from obesity] at some point in their lives:

- 31 % of white girls and 27 % of white boys
- 49 % of African-American girls and 40 % of African-American boys
- 53 % of Hispanic girls and 45 % of Hispanic boys.

Obesity can predispose individuals to increased risk of stroke, heart disease, arthritis, and several cancers.¹ From 1980-2000, the number of overweight children tripled.² In addition to affecting individuals, when diseases like this reach such levels, they place a burden on the general population to provide the workforce and funds for care. The choices children will make about preventable behaviors such as drug, alcohol and tobacco use, and sedentary versus active lifestyle, also contribute to the quality of health they will experience as they grow and mature.

Bob Finkel, guest editor for this issue of *Connect*, *Healthy Kids and Schools*, has approached just this idea. Many educators and schools are taking on what used

to be considered parenting responsibilities, incorporating healthy living into the school day. Thanks to Bob Finkel's research into a variety of programs, this issue shows many examples of teachers and community members integrating important health concepts into the academic curricula.

The first article, "An Ounce of Prevention," by cardiologist Doug James, MD, calls for schools, teachers and communities to share more responsibility for responding to recent findings about avoidable risk factors.

New national programs have health as their central mission; they provide great opportunities to weave together experiential, hands-on learning and math, science and technology concepts.

For example, the Healthier Generation program (<http://www.healthiergeneration.org>) is a collaboration between The Clinton Foundation and the American Heart Association to address concerns of childhood obesity and physical inactivity among youth in the US through active partnerships with schools. (Applications are available online.)

Girls on the Run (<http://girlsontherun.org>) is a twelve-week program that teaches girls (8 to 13) to outline their values, explore team-building skills, and discover how to use one's voice to stand up for beliefs. The program uses topic-related games to train for a five-kilometer run at the end of the program. Instructors are local volunteers who have trained to lead the program.

In articles by Cristina José Kampfner and Mikki Duran, we see examples of communities and students working together with long-term health as the goal. Fitness, activity and nutrition are highlighted in these programs that affect stu-

dents ranging from kindergarten through high school. Kampfner explores emotional health as well, by teaching children how to manage anger and how to communicate clearly.

The Vermont FEED (Food Education Every Day; <http://www.vermontfeed.org>) and Alice Water's Edible Schoolyard program in California (<http://edibleschoolyard.org>) are prime examples of some of the communities, schools, and service organizations working together to provide lifelong lessons in nutrition, cooking and eating. Irene Canaris and Diane Fuleihan write about the importance and success of a long-running programming that interweaves science and math learning with nutrition and organic farming. Dana Hudson and her colleagues write about surveying students before adding healthier foods to the cafeteria menu – but with this twist: the students develop, prepare and serve these initial “taste tests.”

Within these stories of health and fitness, abundant possibilities exist for teachers to dive into content. These include data collection and representation of findings, as in Bob Coulter's article exploring the use of pedometers; chemistry as it arises in food preparation, digestion, hormonal changes, and other body-related issues; change over time, looking at human development and physiology; and measurement as we engage in physical activities, of size, mass, and change in heart rate or pulse, time, force and velocity. Broader concepts such as population density fall into this category, as well as distribution of resources and maintaining a healthy environment in which to live.

While approaching any of these topics, based on our own very unique bodies and our own very personal choices, it is imperative that educators approach these with an awareness and sensitivity to the sorts of social issues that can arise. Kathy Kater, a specialist in eating disorder prevention, presents a clear case for the necessity to teach our students tolerance and a celebration of diversity. She argues for the urgency of shifting a paradigm that calls for thinness and weight loss to one of fitness and listening to one's own body. She cautions against inadvertently setting up

future generations for failure by emphasizing weight loss in the national panic over obesity.

We hope that this issue presents everyone, whether they teach all topics or one exclusively, with very good ideas of how to incorporate long-ranging lessons of health with the typical school day, no matter the content area. With the many resources that are available to us, we can start making a difference now.

Heather Taylor is the Associate Editor of Connect.

NOTES TO COME – 2 citations

An Ounce Of Prevention

by Doug James, MD

Atherosclerosis is the name given to the disease which is the cause of heart attacks, strokes, and obstruction of other arteries. “Athero-“ refers to fat and “sclerosis” refers to scarring. The diet of civilization leads to accumulation of fats under the inner lining of arteries. The body reacts to this with an inflammatory response that leads to a scarred “plaque” in the artery which narrows and may occlude it. The process develops over years. This disease has become epidemic in modern times because of our diet rich in animal fat, salt, refined sugars, and excess calories combined with sedentary lifestyles and increasing obesity. The risk that an American will die of some form of atherosclerosis during their lifetime is over 50%.

The medical profession has focused on treating the complications of the disease after it is well established with interventions to open clogged arteries and drugs to treat cholesterol. However, there are societies that have very low levels of disease without these interventions because their healthy lifestyle prevents it.

Prevention is best achieved through:

1. Diet: Fruits, vegetables, whole grains, minimal saturated fat, adequate polyunsaturated fat, no transfat, moderate salt, a mix of protein sources including fish and vegetables, calorie restriction and minimal refined carbohydrates (Mediterranean diet);
2. Daily physical activity, at least one-half hour per day which helps with weight control, keeps blood pressure down and keeps arteries healthy;
3. Weight control through (1) and (2);
4. No smoking;
5. Control of blood pressure.

Since the disease develops slowly over many years, it is increasingly evident that

we as a society should begin to teach healthy strategies to prevent the development of the disease in childhood before bad habits become established. We must also support community strategies that create a healthy supportive environment for what we are teaching. We need to switch our paradigm from repairing disease to preventing it. Although some persons are genetically predisposed, most persons are the victims of their cultural environment, and the disease can be prevented.

Unfortunately, prevention efforts are not well supported, but there are many things communities can do through the decisions they make in schools and in the community environment, through physicians, nurses, teachers, hospitals, and community leaders.

1. Information about cardiovascular health from the medical community and, in particular, from Cardiac Rehabilitation programs which emphasize the prevention of cardiac disease.
2. Healthy lunches in schools.
3. Eliminate access to unhealthful choices (vending machines) in the school environment.
4. Antismoking programs.
5. Mandate adequate exercise in school and facilitate exercise in the community.

Lifestyle management is the most important need in preventing atherosclerosis, and by far the most cost-effective. Schools have a critical opportunity to teach healthy lifestyles because early good habits can stop the epidemic. It is time we gave this the priority it deserves.

Doug James bio to come

Taste Tests of Healthy Foods

by Dana Hudson, Amy Watmough, Jen Cirillo and Abbie Nelson

Each day schools all over the country face the challenge of serving hundreds of nutritious meals to their students and staff. They contend with meeting US Department of Agriculture guidelines, limited budgets, navigating the USDA commodity program, and satisfying the picky palates of many children. Additionally, there is pressure to address the serious health issues facing youth in the US, namely obesity and Type-2 diabetes. This is not a new concern. Alice Waters, creator of Chez Panisse in Berkeley, California, brought attention to the rising epidemic and offered a unique model called, “The Edible Schoolyard” in 1994. Within this effort, schools, parents and children came to realize that there is and should be a connection between classroom and cafeteria.

More recently, there have been inspiring and creative efforts growing from Connecticut to Alaska. While many school districts have been addressing food security, nutrition, and education for years, one city in Vermont is implementing a different approach. Burlington, nestled between the Green Mountains and Lake Champlain is home to many community gardens, two summer farmers’ markets, and many

diverse restaurants serving its 40,000 residents.

Within walking distance of the city is the Intervale, a flourishing flood plain with twelve small farms, community supported agriculture, a youth-run farm, and a large composting facility. These farms supply the low income population of Burlington with six percent of their fresh produce during the growing season. When all of these components are put together, the results are an active community where many people have a passion for healthy, local and fresh foods.

New foods that students will eat

Ask any parent what it’s like getting children to try new foods and you’ll probably get the same disgruntled answers: “It never works,” or, “Good luck!” But the success of the Burlington School Food Project’s Taste Tests may give parents renewed hope that their efforts are not in vain.

Two years ago, when local interest in improving school food gained momentum, Burlington School Food Service Director, Doug Davis, shared a compelling thought. “I want to serve foods that the students will eat. As for new foods, students need to try them first before they see them in the lunch line.”

The Burlington School District provides over 778,000 meals including breakfast, lunch, after-school snack and summer meals to a diverse population of over 3,600 K-12 students each year. Realizing the need to build relationships between classrooms, cafeteria, and the community, the district has been implementing a host of strategies to address food issues. These strategies include supporting teachers in

Taste test preparers



developing food-related curriculum, providing professional development to food service staff, bringing children to local farms, and inviting farmers into classrooms.

Through this process, the students develop recipes, and in small groups during class time prepare the food item with food service staff and later serve the food in the cafeteria to their peers. Additionally, the students ask their classmates to provide feedback on each food trial. Currently the “taste tests” are being featured in three of the nine city schools. With the support of a collaborative effort called the Burlington School Food Project (BSFP), Food Service Director, Doug Davis, and his staff have been leading a revolution in the cafeteria.

On the day of a taste test

The cafeteria is buzzing; it is a taste test day at one of the Burlington Schools. In anticipation of this day, a local chef has volunteered to assist in the food preparation. As students come into the cafeteria kitchen throughout the morning with their classes to help prepare the taste test item, they quickly realize that stirring a bowl of batter, prepared to serve over 400 students, takes muscles.

While classes may not see the process from start to finish due to their constraints of the school day, each class plays an important role in the process.

Once the food is ready, an adult volunteer sets up the taste test table in the cafeteria and the samples are handed out to students during the four to five lunch periods in the day. Students sample the new fare and are surveyed by their peers, “Did you like it? Would you eat it again?” As a visitor, you might note colorful cabbage salad being served, or zucchini carrot bread, or perhaps yogurt parfaits featuring local yogurt and cafeteria-made granola. What you wouldn’t have noticed is the effort leading up to the event, but perhaps that is what makes it all taste so good!



Conducting a survey

Student involvement

How do taste tests work and how are they helping get new, local and healthy food items on the menu in Burlington schools? The idea is a simple one—involve the students in the process from start to finish, connect what they are eating in the cafeteria to the classroom, and use locally available ingredients. Recipes are decided upon by a host of partners including food service staff, local chefs, farmers, a local food cooperative, and other partners in the Burlington School Food Project. In monthly meetings, school food committees comprised of representatives from these partner organizations lead the process from an idea to the lunch line.

Once the recipes are decided upon, the ingredients are purchased from local farms, distributors, or through City Market, a cooperative food store, in Burlington. Burlington School Food Service also



“Students need to try [new foods] first before they see them in the lunch line.”

has a version of a Community Supported Agriculture contract, whereby money is paid for vegetables in the spring and the school receives the requested item in the summer, to prepare and freeze for the next school year. For example, Arethusa Farm located in the Intervale grew many rows of zucchini (a total of five hundred feet), which was harvested in July and then shredded and served throughout the following school year in the delicious zucchini bread.

On or off the menu?

Not all items that go through a taste test make it onto the menu. For example, squash soup, roasted squash and roasted potatoes, made almost completely from local produce, were not accepted by the students, were too labor intensive, or not repeatable with the current cafeteria equipment. Some recipes, such as vegetable fried rice, cranberry oat bars, or the maple/chocolate chip cookies, are still being worked on to increase their acceptance by students, or to improve their production. Minestrone soup is a regular feature, made with local vegetables, when possible. Baked potatoes, granola and zucchini-carrot bread have also passed the test of the discerning student critics. Cherry tomatoes and other local fresh vegetables appear on the salad and sandwich bars in the fall. Other new menu items include chicken Caesar salad, yogurt parfaits, and



the ever-popular pesto which is making its way to being a sandwich spread, as well as an ingredient in lasagna, pizza, and hummus.

Not all schools in Burlington are serving the same new menu items. With the focus on the middle and high schools, where students make more independent food choices, there is greater potential for changing what foods are offered. An eighth grader at Hunt Middle School said, “Taste tests introduce people to different foods. Preparing the foods is interesting because we learn about food and interact with people like the food service staff and local chefs.”

We know that if a school’s food service (or a parent for that matter) decides to serve a seemingly strange dish they may have to suffer the consequences—upturned noses, sighs of discontent, or worse; napkins full of whatever did not meet acceptance.

In our experience, the guidelines established in Burlington can avoid most of these problems. The keys to success are the active support of the food service staff, involvement of a variety of community partners and, *most importantly*, students’ active participation in the process. With these strategies in place, a school district and its community can be well on the way to a taste test recipe for success.

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For more on the Burlington School Food Project visit <http://www.shelburnefarms.org/PDFs/BSPNewsLetter2005Color.pdf>

“A Sense of Possibility”

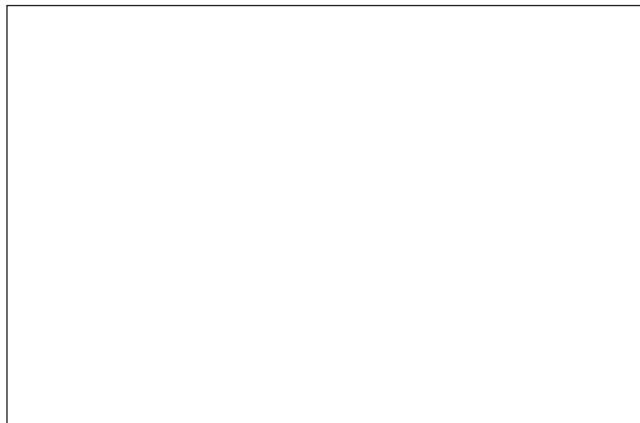
by Cristina José Kampfner, Ph.D.

Latino Health Access, a non-profit service organization, is located just 45 miles south of Los Angeles but when you come to visit us, it is almost like going to another country. Most of the families are led by second or third generation Latinos. There is a great deal of poverty. The parents of the children with whom we work frequently have two or three low-paying jobs.

In the 2000 Census, the city of Santa Ana had a population of 337,977. Of those, 76% were Hispanic/Latino, 12.4% were white, 8.7% were Asian, and 1.3% were Black/African-American. Santa Ana, with a median age of 26.5 years, has the youngest population of the 100 largest cities in the US. Almost 38% of the population is under the age of twenty. More than half of the population was born in another country. Spanish is the primary language for 70% of the city's population. Families from the targeted areas have median annual household incomes of \$15,000-\$19,999, and a median family size is 4.3, placing these families well below the poverty level. At Roosevelt Elementary School, a typical intervention site for Latino Health Access, where 99% of the students are Latino, 92% are enrolled in the free lunch program.

Our founding was in response to the extremely high rates of diabetes that we were seeing among the adults and children, alike. From the outset, we dedicated ourselves to assist in improving the quality of life and health of uninsured, underserved people through quality preventive services and educational programs, emphasizing full participation in decisions affecting health.

There are many reasons for this. We know that poverty itself is a potent factor in disease. A majority of the people we serve live with many stressors that they are ill equipped to manage in a healthy



Caption

way. There are conflicts between parents and their children, and the children are often in trouble at school. Obesity is endemic.

Why is this? Let's look first at nutrition and exercise. Junk and fast food is the cheapest, the fastest to obtain and serve. In our service area there is not a single park. Schoolyards are the only place to play, and they are frequently closed. Landlords charge fifty dollars if children play in courtyards because they don't want the noise. The teachers are either ignorant of Spanish or are not allowed to speak it professionally, so few parents become involved with their children's education. There commonly is a lack of parenting skills, and many children need to learn either how to avoid conflict or how to respond other than with aggression when it arises.

Unhealthy behaviors were prevalent in both the school and out of school environments.

Promotores

There are two critical features of our program: the exclusive use of the *Promotores* model and the direct involvement of the children in its implementation. *Promotores de Salud* are highly trained community

health workers. They are recruited and hired from the communities where they live. They are educators and role models who are skilled at leading their peers toward wellness.

We have developed nearly all of our programs following repeated requests from community members. Inclusion and true community partnerships are cornerstones of our work. For that reason, we see not only needs, but tremendous assets in every program participant, which we attempt to mobilize and harness for the benefit of the community.

We decided to help every child who entered one of our programs become a *Promotores de Salud*; to give every child, even the youngest, the language of modern psychology as a tool to gain insight into their emotions and to manage them; and then to gain the children's help to reach their families. The ninety Child and Youth *Promotores* study a topic, such as nutrition, and then creatively reach other community members with the same message. The program focuses on academic health, physical health, mental health, community building, and enrichment activities that promote a sense of possibility. Right now, we are implementing the program in partnership with an elementary school where 98% of the children participate in the free lunch program.

Finding further needs

We have seen results, both in 'hard' endpoints and anecdotal observations. We were disappointed, although not surprised,

to find that the vast majority of the children coming into the Children's Initiative had underdeveloped social skills. 68% did not avoid situations of potential conflict. Influencing factors included the length of time the children spent unsupervised,

as well as the lack of opportunities to have guided instruction. We have found that we have had to invest a significant amount of time teaching the children social skills. Preliminary data from pre-and post tests indicate that the children have increased seat belt usage, made changes at home to prevent injuries, increased skills to resolve differences without aggression, and increased key social skills. Additional data is being collected on consumption of fruits and vegetables, and daily physical activity levels.

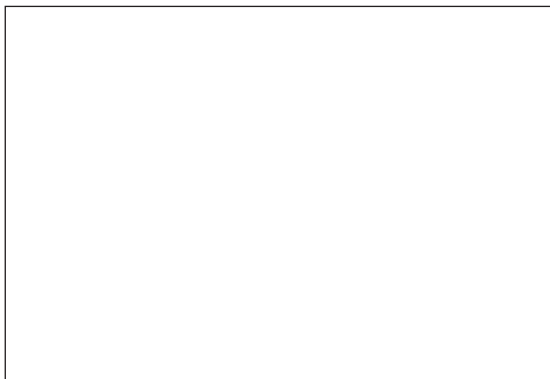
Bringing it home

Since the students return home and teach their parents and siblings about anger management, a wonderful side-effect of this part of the program has been the positive effect that it has had on the emotional lives of their families. The parents often report that their children stop them from screaming or hitting other siblings by saying, "You should count to ten when you are angry. It helps to calm down," which is one of the tools that we provide to the students. One of our mothers reported, with tears in her eyes, that she is learning from her child to control her own anger.

We are dedicated to helping these students develop good social skills by providing hands-on experiences for them. Each child is invited to reflect about any given experience in a developmentally appropriate way. One of the extremely useful learning tools in this process has been to have students teaching others in order to gain a deeper understanding of the situations and the issues embedded in them.

Children write plays about their experiences. If they want to address a situation where they live, they take their brief skits and invite the tenants in the building to help them write the ending of the play. The skits are often about conflict and how best to resolve them. Learning to say "No" in a difficult situation is also taught through skits. In addition, the children write in their journals every day. Younger children learn to identify feelings while the older children engage in discussions of

Caption



current events where there are conflicts as a way to learn how best to resolve other conflicts in their community and in the world.

Field trips and workshops

We are committed to experiential learning, and we connect the curriculum for the students and their families with monthly field trips to such places as the Discovery Science Center, the Planetarium, Whole Foods Market, the Los Angeles Museum of Tolerance, Kicks for Kids Soccer Game, the County Recycling Center, the Los Angeles Zoo, the Children's Museum, and the Aquarium. These field trips increase the social capital among families, break the isolation among them, and increase their learning. The youth and their families also participate in camping trips sponsored by LHA where a psychologist and their teachers help with mental health issues. All the programs with the kids involve thirty minutes of exercise, because otherwise they get no exercise during the day.

We run an eight-session workshop on label reading, shopping, cooking, and the choosing and preparing of healthy ethnic foods. We run a communication workshop to help parents overcome cultural issues and feel more comfortable with their children pursuing their educational aspirations.

Finally, the youth engage in issues of social justice and social change. They have organized against the issuance of more alcohol licenses in the neighborhood and presently they are actively researching and meeting with officials about the problem of trash in their neighborhood. Our evidence indicates that youth engaged in the program change their attitudes and improve their school performance, as well as enriching their families' lives. These boys and girls are well on their way to being strong young women and young men who are leaders for a healthier community.

Cristina Jose-Kampfner, Ph.D. is currently an assistant professor at Eastern Michigan



Caption

University in psychology and education. Her research, writing, and activism have been around the effects of incarceration on women prisoner's children and families. She has received numerous awards such as the President's Volunteer Action award from President Clinton in 1994.

Our evidence indicates that youth engaged in the program change their attitudes and improve their school performance

The Healthy Snack Program

YES, YOU CAN ENJOY CARROTS AND CUCUMBERS FOR SNACK

by Irene Canaris and Diane Fuleihan

How hard is it to get a child to risk crunching on an unfamiliar vegetable? Many parents would like to know a secret formula for encouraging their children to eat five fruits and vegetables daily in a rainbow of colors. We, at the East Wing Mini-School, part of the Westminster Center public schools in Westminster, Vermont, think we have found a potential recipe.

Every good teacher knows that the key to generating excitement for discovery and learning at any age is to involve students personally. In the East Wing, learning about healthy nutrition choices begins with student planning for a year-round garden in a multi-age setting.

Starting with seeds

In January and February of this year, students from first to fourth grade perused the colorful photos of vegetables and flowers in the recent catalog from Johnny's Selected Seeds in Maine. First graders circled photos of what seemed the most palatable tomatoes and cucumbers, sharing their likes and dislikes with peers. A returning second grader, who remembered the important job of collecting cardboard



milk containers at lunch, began the process of gathering them once again. Quite a few of his friends offered to help, carrying bowls of soapy water to the cafeteria for rinsing the used cartons. Milk cartons would be stored away in plastic garbage bags until they were needed to house seedlings.

In the third and fourth grade, students who had previously participated in our February seed-ordering ritual took over the planning for this lesson. Together they set up a format for entering the page number, name, quantity and price of seeds on large chart paper. As a team they presented a mini-lesson to the class on entering data into the format. In a few moments, pairs of multi-age students had their heads together bent over catalogues. They chose their favorite vegetables and flowers and entered the correct information into the mock ordering sheets they'd been given. The classrooms were buzzing with comments about which variety of carrots to order and which tomato tasted best. From the youngest to the oldest, each student had a voice in what was to be selected for the summer garden. Older students pointed out smart and economical choices and younger students watched as the names and quantities of their vegetable seeds were entered into the charts.

At the next multi-age meeting, student pairs read their number-one choices. As the older students recorded the information on the master list, discussion ensued over whether it was practical to order more than one variety of small tomato or carrot. Older students reminded the class that no one had ordered beans for the dilly beans we pickle each September. There are many opportunities for a democratic process to be modeled during these real life discussions.

A community expert

Every March, we hold a ritual “first planting” session with our organic farmer-partner, Paul Harlow. When he arrives, the students are ready for their lesson in how to plant a flat of seeds. He explains the importance of the three key catalysts for seed germination: water, soil and air. He then demonstrates with a ruler how one carefully creates mini-furrows in the flat of potting soil. With the precision of a skilled surgeon, he picks up a pinch of marigold seeds and gently sprinkles them down the row. Then he slowly covers the seeds with the tiniest bit of soil, reminding students that the seedlings need air for germination. The next step in this process is a mist of water over the tiny rows of seeds. Lastly, a covering of plastic wrap protects the seeds from drafts. Paul always reminds the students that germinating seeds do best without light until some green appears. Then the flats can be set under grow lights. This provides an opener for future discussions about photosynthesis.

In a few weeks the seedlings are ready for transplanting and all the efforts of the milk carton recyclers are appreciated. In teams, again, children learn to separate seedling root hairs, fold down and fill milk cartons with damp potting soil and lovingly place each seedling in its pot. Labeled milk cartons must have holes poked into the bottoms with a sharp pencil for proper soil drainage. The seedlings are carried out to a small greenhouse built long ago by parents, community members and former East Wing children. During April and May temperatures can fluctuate dramatically from night to daytime. The children carefully monitor the thermometers and open windows or turn on the heater as needed.

Into the summer

By mid-May the students can distinguish one plant from another by its leaf shape as well as its written label. Many marigolds are beginning to flower. These extra plants



Third and fourth graders present a lesson to the rest of the class on ordering seeds from a catalog.]

as well as basil and herb plants are sold to members of the community at a stand outside the school door in the morning. The youngest students learn how to interact with customers and how to count change.

In June, just before school is out for the summer, the East Wing hosts a planting day. It usually coincides with moving-up day for Kindergarten students, future members of the East Wing. They form partnerships with the older students and they plant together. We keep records of the vegetables or flowers that the teams plant. This graphic garden history also serves as a lesson for crop rotation. Students learn about the importance of replenishing what is taken from the soil. (During the school year a daily classroom job is taking scraps out to the compost that will later be used to feed and nourish the soil.)

Summer is a time for community involvement. It is an opportunity to spend



Children work in the greenhouse built long ago by parents, community members and former East Wing children.

a few hours together in the garden to mulch, weed, share summer plans and harvest whatever might be coming in early. Garlic, planted in the fall, is harvested in July and stored in a dry breezy barn for use the following fall. Basil plants, cultivated for making pesto in September (frozen in small quantities for winter use), need to have their tops pinched regularly in the summer months to encourage new growth. This has provided incentive for many parents to come and weed the garden with their children. Beans mature quickly. They are not planted until mid-July. Then they are directly sown into the soil. Children measure the depth and width apart for the planting of beans and sunflower seeds.

Back to school and the garden

When students arrive in the fall, they can refer to the garden maps we made in the spring to find their mature plants and flowers. Harvesting becomes a magical chore. Children share memories of favorite vegetables or watch and absorb through peer osmosis an appreciation of fresh produce.

As we begin the school year, we prepare for snacks to be eaten later, when our garden will lie dormant. Beans are harvested in great quantity. Through the efforts of all, students, teachers, parents

The “magical chore” of harvesting is even more enjoyable when protected from the sun!



and community members, they are transformed in a morning into jars of beans, pickled with garlic and dill. We employ an assembly line method and each student's job is seriously necessary. Students enjoy their crisp, tangy flavor of dilly-beans all year long. Basil, garlic, parmesan cheese and nuts are loaded into a food processor and become the pesto that in January students will have learned to love on top of pizza and pasta. Tomatoes, onions, peppers and garlic are cooked down to a wonderful tomato sauce, frozen in zip-lock bags and stored in our freezer.

In the lean Vermont winter months we often order supplemental produce from local distributors. There are times when we are called upon to dramatize the enjoyment of an alien-looking fruit or vegetable. It is then that our own dedication to trying new things becomes an important model for the children. We call for their attention just before snack is served and tell them a little story about whatever it is we're about to eat (the story of Demeter and Persephone works especially well for pomegranates). Then we make an exaggerated fuss about how delicious it is as we swallow a few mouthfuls. We feel as if we're performing some rite that has been passed down from mother to child for millennia. We also feel that the process of trying new healthy snacks together is a first important step to introducing an appreciation for diversity. It can be seen as a metaphor for cultivating a taste for the unfamiliar and it brings us closer to teaching tolerance to our children.

Irene Canaris and Diane Fuleihan are co-teachers in the first- through fourth-grade, multi-age classroom at the Westminster Center School in Westminster, Vermont. Their garden program received a School to Work grant in 1998. It has been featured in the fall, 2000 Community Works Journal, CBS's Morning show in 2003, and the journal Children's Environments. Diane and Irene have presented at numerous national school reform movement conferences including the Coalition of Essential Schools Fall Forum, and with organic farmer, Paul Harlow, they were keynote speakers at the 2000 Northeast Organic Farmer's Association conference.

Healthy Kids and Learning

by Mikki Duran

Students who are well nourished and physically fit are better able to focus in the classroom and achieve academic goals. That statement is supported by a great deal of research but to most of us it would seem to be common sense. In an effort to promote and support healthy lifestyles, the staff of the Appleton (Wisconsin) Area School District has engaged in a variety of programs to promote fitness and nutrition. When this effort began, there were good reasons for taking some action. Appleton ranked as the most overweight city in the state, with 64.4% of the adult population either overweight or obese. The risks to students are high, with the Centers for Disease Control pointing out that nationally overweight adolescents have a 70% chance of becoming overweight or obese adults. In addition, one in three children born in 2000 will become diabetic unless their lifestyle behaviors change.

Elementary action

The school district's Education for Healthy Kids program had its genesis in 1997 as a three-year pilot study involving children in kindergarten through sixth grade. Its purpose was to determine whether engaging very young children in increased physical activity and better nutrition choices could help them avoid later behavior that could bring high health risks, including tobacco and drug use, alcohol abuse, and sedentary lifestyles. Through this program we have learned that behaviors established early in life are sustained throughout middle school and high school and higher academic achievement has been associated with higher levels of fitness.

In 1998, the Appleton Area School District formed a partnership with Natural Ovens of Manitowoc. Natural Ovens is a



bakery and health food company founded by a couple who believe that students who are served fresh food that is nutrient dense, should be able to focus better in the classroom. They sponsored a kitchen in Appleton Central Alternative High School where they incorporated whole grains, fresh vegetables and fruits into breakfast, a healthy snack, and lunch. The school took out all snack and soda vending machines. Students' behavior problems dropped, there were no incidences of vandalism, students were more focused in the classroom, and students said they felt better. This program has been featured numerous times on national television and in the movie, *Super Size Me*.

Reaching all students

As a result of the documented success of the Education for Healthy Kids program and the Appleton Central nutrition program, the Board of Education and administration wanted all students in the district to have the same opportunities to benefit from better nutrition and increased activity. Through research and the district's own experiences, we knew that these programs helped improve academic scores.

Areas that we have focused on are: increased activity for our students, improved nutrition, health concepts integrated into all curricular areas, and a healthy school climate promoted through school functions.

Activity!

At the elementary level, students receive physical education twice per week for thirty minutes. Physical Education classes have moved away from a team sports model to more health and fitness-related components. The goal of Physical Education classes is to integrate nutrition and physical activity in the students' target heart rate zones, developing muscular strength, and developing physical skills to become competent in a variety of movement skills. Elementary students also have two fifteen-minute activity times called "Fit-n-15" that the classroom teacher facilitates. During the "Fit-n-15," the students are vigorously active for fifteen minutes using simple games to promote activity and elevate heart rates. Teachers report that students are more focused in the classroom after their activity times and there is a positive correlation between increased activity and academic performance.

In middle school, the students develop individual fitness goals. They begin to use heart rate monitors to track if they are functioning in their target heart rate zone.



Students learn how to create personal fitness goals and make healthy choices in regard to nutrition and activity.

At the high school level, the Appleton district has changed the curriculum to electives where students can choose physical education classes that reflect their interests and promote lifetime activity. Students continue to work with state of the art technology and fitness centers to help promote fitness goals.

The District provides opportunities for students to engage in physical activities both during and outside of physical education classes. With new assessment and fitness equipment, we are able to capitalize on the time students spend in physical education classes and ensure they remain in their safe target heart rate zone. We also promote lifelong and daily activity by featuring before- and after-school, lunch-hour, and summer programs to promote physically active lifestyles. Each level has numerous intramural options available for students. Intramural examples would be: walk run/clubs, spinning classes, ski clubs, biking clubs, rock climbing clubs, traditional games such as basketball, volleyball, floor hockey, gymnastics, etc.

Improved nutrition

We have instituted a district-wide nutrition policy that affects all levels. In addition to the policy, teachers promote healthy snacks in their classrooms and allow students to drink water in class. The policy itself goes into great detail, but the goals stated at the outset are both straightforward and challenging:

1. Provide a comprehensive learning environment for developing and practicing lifelong wellness behaviors.
2. Support and promote proper dietary habits contributing to students' health status and academic performance.
3. Increase the amount of time students are engaged in physical activity.
4. The Appleton Area School District is committed to improving academic performance in high-risk groups so that no child is left behind.



Integrated health concepts

We have begun a comprehensive K-12 health curriculum. Health is no longer limited to just one unit or class. At the elementary level, health concepts are integrated into all academic areas. Secondary schools promote healthy behaviors and the dimensions of wellness (social, physical, emotional, spiritual, environmental, and intellectual). These concepts help students to become well-rounded adults.

Healthy school climate

In an effort to enhance school environments to promote and support healthy lifestyles, the Appleton Area School District sponsors the Education for Healthy Kids summer institute which provides educators and parents with research-based knowledge about good nutrition and fitness. From these institutes, school-based teams are formed to develop further plans to strengthen a school culture based on healthy decision making for students. Teachers report successes with this program on many levels. Recent comments include, “Students are more alert and focused.” “[They] are more relaxed and prepared to listen after some physical activity.” “Learning skills and rules for games have given my students more confidence, which rubs off in their ability to think and learn in the classroom.”

During recess we have also noted greater cooperation. One teacher reported, “There are fewer fights on the playground because students have games they can play and they know the appropriate names for these games. Less fighting means more time in the classroom and less time in the principal’s office.”

The program for healthy kids in Appleton, Wisconsin, has been successful, in part, because it has stuck to a combined focus on fitness, exercise and nutrition. It has also been a real commitment of the district with cooperation from staff and administration throughout. Now our challenge is to keep it going, adapting to new needs and issues and serving further generations of students.

[BIO – TK]

Resources

The school district offers an informative briefing on the program and its many facets through a PDF that is available at:

<http://www.aasd.k12.wi.us/SBA/publications.htm>

A video clip of the program developed by Natural Ovens at the high school can be viewed at: <http://www.naturalovens.com/Schools/>.

Technology for Learning

A Healthy Approach to Math

by

BOB COULTER

Class projects promoting physical health offer many chances to improve the vitality of your students' data analysis skills in the process. From counting calories to monitoring personal exercise regimens, opportunities for individual and class investigations abound. One particular area worth considering is working with the data your students can collect with simple pedometers. Whether you share a small number of units, or invest in a class set (available for under a hundred dollars in a recent Google search), pedometers can help you generate data sets that provide days of productive investigations. If your budget is particularly tight, it is likely that parents or colleagues will have units you could borrow for a while.

Through a well-focused series of explorations, many of your curriculum goals can be met. Aside from meeting the *National Educational Technology Standards* relating to using technology for productivity and research, your students will be developing skills in several areas addressed by the national *Principles and Standards for School Mathematics* including algebra, measurement, data analysis, communication, connections, and representation. The examples here are just a couple of the possibilities that will arise as you and your students mine the data collected.

Counting Paces

The simple act of counting paces over the course of a day gives students a chance to develop skills in collecting, recording, and organizing data into tables and graphs. Opportunities will also present themselves to deepen students' understanding of measures of central tendency such as mean and median. For any one person, the number of steps taken in a given day will vary

depending on what he or she does. Over a five day period recently, I recorded a range of steps, from a low of 8,334 to a high of 13,001. The low day was spent mostly in my office; the high day was spent at a technology conference held at Arizona State University, which entailed considerable walking around a large university campus as well as trips through the St. Louis and Phoenix airports.

Projects like this help students to see that collecting real data usually results in a range of values, and that what is presented as "typical" doesn't occur every day, if ever. Hence, the need for developing an understanding of measures of central tendency such as mean and median. The opportunities to build this understanding get even better if you have a class set of data, since each student can compare their personal data with class norms. Class averages will also show the effects of larger sample sizes, since individual highs and lows will effectively cancel each other out in means and medians. The superjock and the couch potato may define the extremes, but the class average will fall somewhere in between.

Not to be missed in this "messing about" with the data is the opportunity to compare individual data with established standards. Just as calorie counting can help to monitor for an appropriate level of eating and heart rates can help in gauging the aerobic effects of exercise, tracking the number of steps taken can help in evaluating the amount of exercise each person is getting. (Your own data shared publicly, of course, sets an important example for the class.) Many experts recommend 10,000 steps per day, a level that I missed slightly in my five day trial run. (My average for the five day trial run was 9,795 steps per day, though it should be noted that not all

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steps in a day will be recorded unless you wake up and go to bed with the pedometer.)

How Far Did You Go?

Aside from basic counting of paces, pedometers can be used to determine how far you walked. Many pedometers will attempt to tell you how far you walked in a given day, but that number is dependent on how long each stride is. An average-sized first grader and a teen who has experienced a growth spurt will inevitably have different stride lengths, which will lead to dramatic differences in the total distance traveled while taking the same number of steps. Viewed another way, the first grader would need to take more steps to cover the same distance.

To investigate these relationships, a spreadsheet can be quite useful. The example here uses ThinkFree Calc, but a number of others such as Microsoft Excel and OpenOffice could be used. The key is to be able to establish formulas expressing the relationships between cells in the table. Depending on the sophistication of your students, you may want to have them generate the formulas involved or simply show them how the calculations are being done. In the figure shown here, data for two boys from the same family are listed, along with my data. For each, our stride length is recorded (in inches) and the distance (in miles) covered in 10,000 steps is calculated by the spreadsheet. Your students may be surprised to see how many miles they walk in a day.

In addition, data is calculated for how many steps would be needed to match the distance that would be covered in the 10,000 steps taken by each of the other 2 people listed. As you can see in the table, Turner and William provide surprising results. Even though Turner is taller, his stride length (as it was measured that day) is a bit shorter. This anomaly is likely to

occur with at least some of your students, which gives you a wonderful opportunity to extend everyone's learning. The curiosity engendered by an unexpected event like this can provide a springboard to more experience with measures of central tendency as students determine class averages for stride, and learn about correlation as they create a graph comparing each person's height and stride length. Of course, authentic uses of fractions and ratios will abound here, helping to counter the ever-present math refrain of "When are we ever going to use this?"

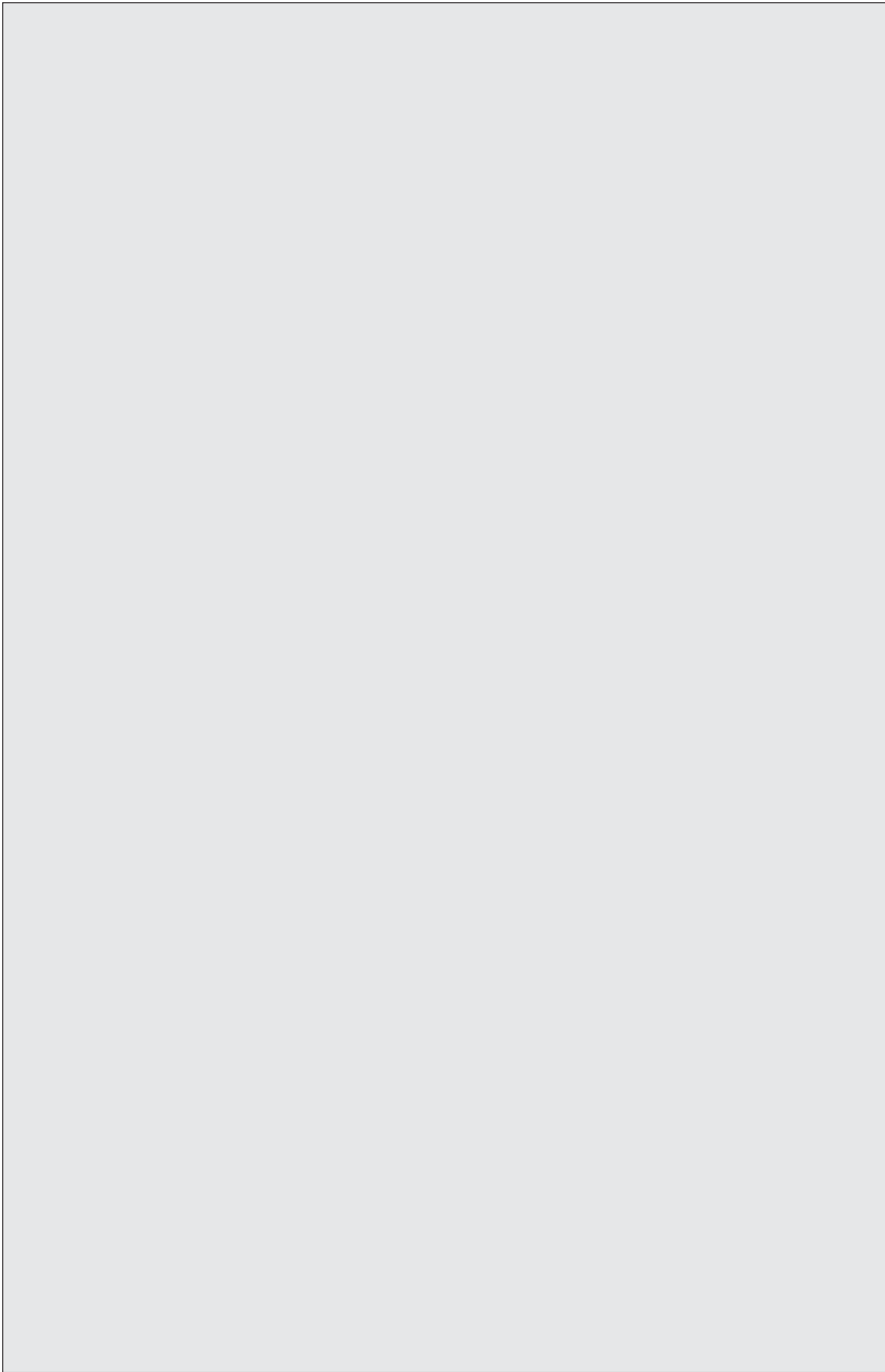
As these examples show, a simple tool like a pedometer can lead to a rich array of data investigations. Authentic opportunities emerge for students to experience the power of mathematics and technology to address real needs. Too often, schools teach computer skills in a "just in case" mode, with the premise of learning tools just in case they are needed some day. Instead, through investigations like the ones here, students can develop skills just in time for their use. Portable data collection devices are used to collect interesting data, which is then organized, analyzed, and presented using powerful tools to answer real questions. Along the way, their understanding of healthy exercise will improve and they will develop important math skills. Stepping back a bit, these projects show how school work can be meaningful and intellectually rich while not neglecting academic standards.

caption

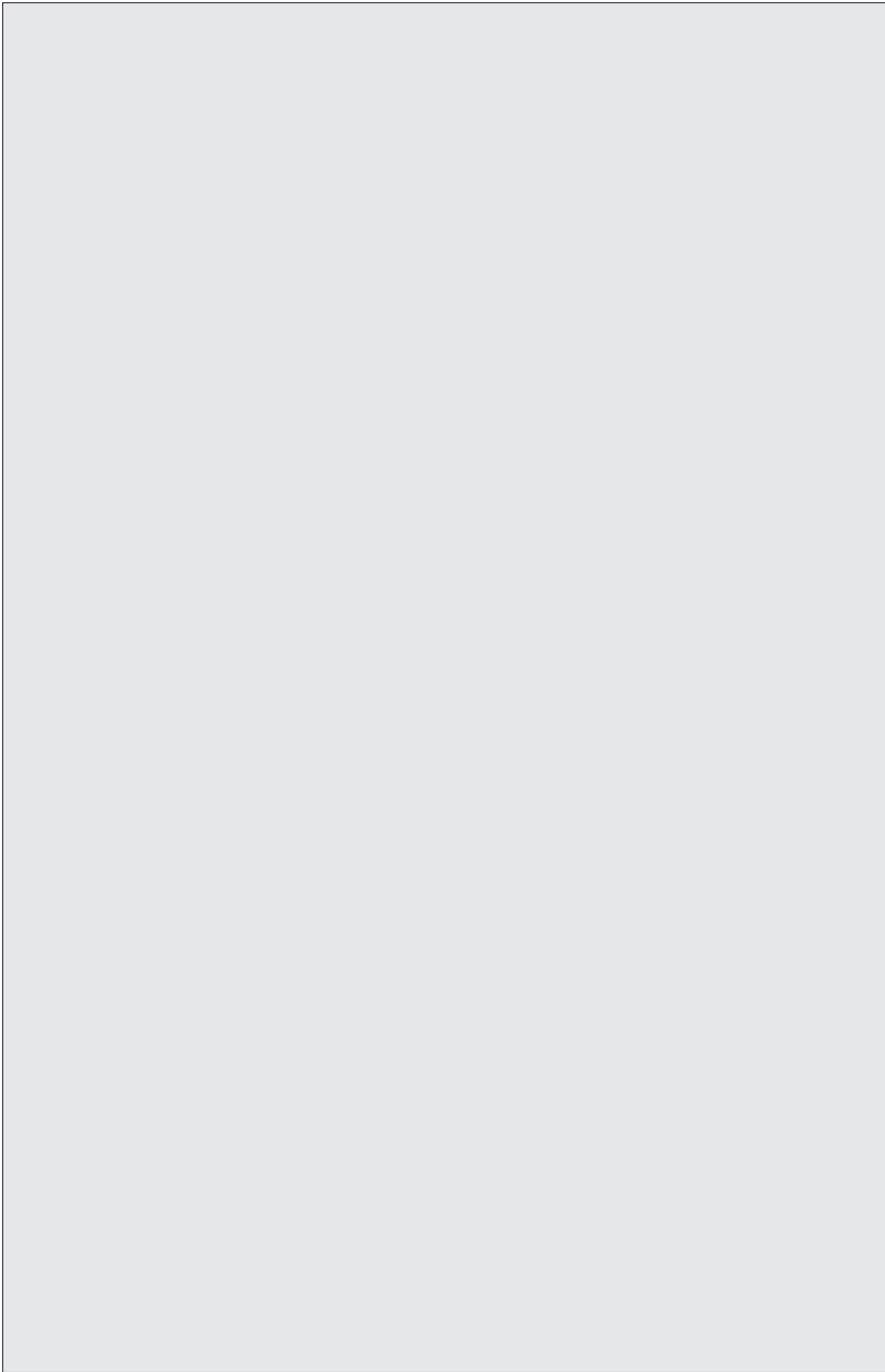
photo tk ?

Name	Basic Data:			Equivalents in:		
	Height (in.)	Stride (in.)	10K_steps (mi.)	Turner_steps	William_steps	Bob_steps
Turner	57	20.2	3.19	10,000	11,634	14,356
William	53	23.5	3.71	8,596	10,000	12,340
Bob	68	29.0	4.58	6,965	8,103	10,000

Literature Links



Resource Reviews



Promotion of Healthy Weight

HELPING WITHOUT HARMING

by Kathy J. Kater, LICSW

As headlines warn of a “war on obesity” and a barrage of advice to “lose weight” bombards us, a reminder about the directive to “first, do no harm” has never been more urgent. A full array of interrelated body image, eating, nutrition, fitness, and weight concerns affects the lives of most children and adults today. By targeting these problems separately, we fail to see the common seedbed out of which they grow. By defining fatness as the problem and weight loss or control as the solution, we persist with a paradigm that is ill-conceived, short-sighted, contradictory, discriminatory, and sometimes outright dangerous. It diverts our attention from genuine risk factors and interferes with what should be our real goal: health and well being. In the meantime, body image, eating, nutrition, fitness, and weight problems compromise the welfare of more and ever-younger children.

Any effective health promotion initiative must judiciously reject methods that have proven futile, and vigorously avoid recommendations that appear to solve one problem at the expense of another. In this case, our common objective—healthy students—must be sought through holistic attitudes and recommendations that adhere to this goal and are thereby equitable and non-contradictory. It is alarming that most current responses to the rising rate of fatness do not succeed in this regard.

The flood of popular and medical advice for weight reduction begs this question: has a pervasive and persistent focus on weight proven to be successful? For forty years Americans have assumed more personal responsibility for their weight, claimed more weight-loss intentions, and engaged in more weight-loss efforts than ever previously imaginable. On any given day, 46% of the population is actively on a weight-loss diet, and many more are planning to begin (or resume) dieting soon. Roughly 70% of females over the age of thirteen routinely

cycle on and off of various weight-loss plans decade after decade, and they are being joined by a growing number of men. Yet with all these efforts, the number of Americans considered overweight has risen from somewhere around 14% in the 1960s to over 50% today. Clearly, weight loss or even weight control as a goal has not worked and is not working still. Yet our persistent responses deny this fact: *The thinner we try to be, the fatter we become.*

What this means for our students

Teachers report that even kindergarteners today mimic the fat-distaining talk of their elders. Whether five-year-old children fully understand their own words, clearly they are learning the language of our fat-phobic culture and the weight loss “solutions” it offers. Such children are not learning to feel integrity in their bodies, to trust inner cues about what they need, or that we want them to eat well for health and well being. Instead, from a very early age, they are learning to feel insecure and self-conscious, to mistrust their hunger, to think of themselves as “good” or “bad” based on the size of their stomachs, and to set themselves on a course in which weight loss and gain are a central focus of their lives.

If we are to effectively prevent or reverse these negative trends, it is essential that new models correct the flaws of prior efforts. First and foremost, *fatness* must be replaced as the perceived problem. In its place, solutions target the root causes for: 1) the rise in unhealthy fatness, 2) the unrealistic drive to be thin and the restrictive eating that accompanies it, 3) poor nutrition and fitness habits in people of all sizes, and 4) weightist attitudes that deny the integrity of size diversity—*simultaneously and without*

contradiction. A new paradigm must not lose sight of *all* of the documented, culturally-induced risk factors and must make recommendations that are not at cross purposes. Fortunately, enough is now understood about the underlying causes to do so.

Frustrated by the lack of progress in general understanding of these concerns, I developed the *Model for Healthy Body Image (MHBI)*—a holistic approach to help children and adults to value health and resist pressures that promote negative body images and counterproductive lifestyle habits. This model has been tested clinically and in a popular and successful curriculum called *Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too!* This curriculum has demonstrated very positive results in outcome studies with students in grades four through six, and it is endorsed by the U.S. Department of Health Office of Women’s Health in their *Bodywise* information packet for educators. *Real Kids Come in All Sizes: Ten Essential Lessons to Build Your Child’s Body Esteem* is a companion book written for parents.

Comprehensive model

Concepts contained in the MHBI are a response to a set of four pervasive, distorted, culturally transmitted beliefs or *toxic myths* that underlie most body image, eating, fitness, and weight problems today. Rather than warning children about what to avoid, this approach teaches students what to embrace to maintain health and integrity in the face of unhealthy pressures. Ten prevention principles or *antidotes* directly challenge the premises of these myths and empower resistance to their negative influence. In turn, more wholesome attitudes and behaviors are maintained or reinstated. The antidotes teach:

- a. the biological limits to manipulation of body size and shape through healthy means,
- b. choices that enhance healthy weight, body image, and self esteem,
- c. actions for resiliency in the face of conflicting messages.

Figure 1 illustrates this organization.

Interdependent toxic myths underlie problems

As with any holistic model, it is essential to keep all four toxic myths or contributors to body image, eating, fitness, and weight problems in mind in order to maintain a balanced perspective and to reject solutions that conflict. The myths are summarized here.

Myth 1: Image is valued over substance: Marketing of ultra thin models *as if they were normal* has been very effective in creating tremendous appearance anxiety in general and fear of fatness in individuals who naturally want to be normal and fit in.

Figure 1

THE MODEL FOR HEALTHY BODY IMAGE			
Conceptual Building Blocks	Foundation	Desired Outcome	Goal
<p>Developmental change is inevitable. Normal changes may include weight gain and temporary out-of-proportion growth. Fat does not, by itself, define “overweight.”</p> <p>Genetics and other internal weight regulators strictly limit the degree to which shape, weight & Body Mass Index can be manipulated through healthy means.</p> <p>Restricted or restrained hunger (dieting) results in predictable consequences that are <i>counterproductive</i> to sustained weight loss and interfere with normal hunger regulation.</p>	<p>Recognize and respect basic biology; understand what <i>cannot</i> be controlled about size, shape and hunger.</p>	<p>Accept the innate body: “This is the body I was born to have.”</p>	<p>Healthy Body Image</p> <p>Prevention of Unhealthy and Disordered Eating</p>
<p>Balance attention to many aspects of identity. Looks are only one part.</p> <p>Satisfy hunger completely with enough varied, wholesome food in a stable, predictable manner on a regular basis.</p> <p>Limit sedentary choices to promote a physically active lifestyle through all stages of life.</p> <p>Choose role models that reflect a realistic standard and enhance self esteem.</p>	<p>Emphasize what <i>can</i> be influenced or chosen.</p>	<p>Enjoy eating well for health, energy, enjoyment, and hunger satisfaction.</p> <p>Create a physically active lifestyle for fitness, endurance, fun, relaxation and stress relief.</p>	
<p>Promote historical perspective on today’s cultural attitudes related to body image.</p> <p>Develop media literacy. Learn to think critically about media messages that influence body image.</p> <p>Support others in resisting unhealthy norms about weight, dieting, low nutrient food choices, excessive eating for entertainment, and sedentary entertainment.</p>	<p>Develop social and cultural resiliency.</p>	<p>Develop autonomy, self esteem, confidence, and the ability for critical thinking.</p>	

Myth 2: Denial of biological diversity: For the drive to be thin to be widely embraced, biological diversity of size and shape had to be denied. Instead of accepting that wholesome eating and fitness result in diverse BMIs, the current norm is to mistrust the body's ability to regulate weight if/when the end result is or might be visible fat.

Myth 3: Denial of the counterproductive effects of externally prescribed hunger regulation: Since restrictive eating results in short term weight loss for most people, this is routinely presented as evidence that anyone can be slim(mer) if they “work at it.” “Dieting” continues to be viewed as the primary means to achieve this, even though its dismal success rate has been well documented since 1950. At least 90% of weight lost through any type of weight loss plan is regained, and frequently with added pounds.

Myth 4: Discounting the value of health: When appearance, the drive to be thin, denial of biological size diversity, and the diet mentality dominate, the primary purpose of eating and fitness is lost: “*Why eat healthy (or be active) if it won't make me thin?*” Given a market flooded with entertainment foods and sedentary pastime options, the number of people who routinely override their internal hunger and weight regulatory system, are poorly nourished, and lack basic fitness has increased exponentially.

Prevention principles provide antidotes

The MHBI provides ten prevention principles to challenge the authenticity of normative toxic beliefs regarding appearance, size, weight and the purpose of eating and fitness, thereby promoting positive body esteem and weight related attitudes. Concepts assert that:

1. Integrity should be valued over appearance;
2. Innate size diversity should be accepted and affirmed;
3. Internal hunger regulation should be trusted; dieting should be strictly avoided;

4. Hunger should be consistently satisfied with food that balances wholesome nutrition, energy, and good taste;
5. Physical activity should be part of the daily routine, maintained throughout life for fitness, self-confidence, and emotional well being;
6. Role models should reflect a realistic standard based on deeper qualities rather than appearance.

In practice, the MHBI concepts are best conveyed through simple language using stories and experiential activities such as those provided in the *Healthy Body Image* curriculum. A summary of the health promotion messages and demonstrations of how these may be presented in a concise format may be downloaded at: <http://www.bodyimagehealth.org>.

To avoid a skewed perspective it is recommended that students be taught *all* of the MHBI concepts. For example, it is not enough to critique the presentation of “ideal” beauty in the media, or to teach acceptance of biologically diverse body sizes without giving equal attention to the essential need, for wholesome eating and fitness for health regardless of size. Likewise, recommendations for balanced nutrition and physical activity may backfire if individuals are left with the common belief that they can expect to be rewarded for these choices with a slim physique. Finally, clear education about the predictable, counterproductive effects of dieting for weight loss must not be neglected, particularly as the “war on obesity” adds fuel to the fear of fatness and the diet mentality it spawns.

Defining a more realistic goal

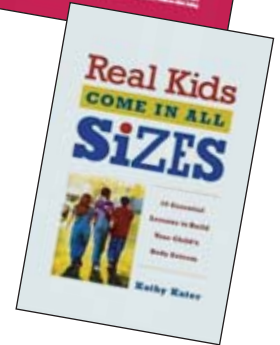
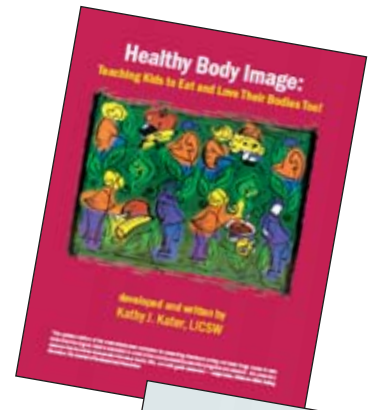
Once again, when fatness is defined as the problem and weight control is the reason for wholesome choices, the result is a set-up. Those who perceive themselves to be “too fat” (irrelevant of actual weight) suffer negative body esteem and are at risk for diet disorders, and eventual complacency or defiance about health habits after futile weight loss attempts. Individuals perceiving themselves to be slim enough don't know

(or don't care) that recommendations to eat well and stay fit apply to them too: "I'm not fat. What difference does it make what I eat?" In contrast, when strength, stamina, flexibility, vitality, and vigor (including metabolic fitness and nutritional soundness) are our primary goal, we sacrifice nothing, avoid harm, and gain an approach capable of enhancing the health and well being of everyone.

Resources

Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too! Second Edition (2005) National Eating Disorders Association, Seattle, WA. Originally published 1998. May be ordered from www.nationaleatingdisorders.org (click on NEDA Store).

Real Kids Come in All Sizes; Ten Essential Lessons to Build Your Child's Body Esteem. (2004) Broadway Books, New York, NY.



Sample Activity from the *Healthy Body Image* Curriculum

Teaching students about the counterproductive effects of “dieting” for weight loss: In this lesson students are introduced to the five basic needs for life: food, water, sleep, air and warmth. When considering the need for sleep and fluids, a lively discussion of personal experiences reveals that predictable consequences occur for everyone when these vital needs are not fully satisfied, especially over several days or longer:

1. A gradually increasing preoccupation with and craving for what is rationed
2. An increasing difficulty concentrating on anything else
3. A growing irritability, self centeredness and/or depressed mood.
4. When restraints are lifted, there is a powerful urge to make up for what was missing—to “sleep in” or guzzle liquid. It might take several days of wanting a more than usual amount before balance is restored.

The teacher then poses “Do you think the same thing would happen if you didn’t get enough air to breathe? Let’s try it! I think you could all benefit from going on a little ‘air diet.’ I think you have been breathing entirely too much, and your cheeks are too richly colored or rosy. You know, the latest style is to have a kind of gray or blue tone to your skin, and oxygen is what gives our cheeks that rosy glow. Yes, I think you all would be better looking if you cut back on your oxygen so your face coloring would be more drab. Of course, you will need some air to live. But surely you could cut back. Won't it be worth it to have the “right look?”

Each student is given a straw to breathe through while plugging their nose until the predictable consequences 1–3 (above) are apparent.* When “cheating” occurs, the teacher may chide students for “not having enough willpower.” When students are allowed to “go off” their “diet,” they inevitably (and dramatically—as kids are prone to do) “gulp” big mouthfuls of air. This primes them for a meaningful discussion of why weight loss diets are not effective. When satisfaction of any of our basic needs is limited by external forces or rules, the results are reliable. Dieting for weight loss promotes obsession and preoccupation with food and compulsive or binge eating when the diet is stopped. Symptoms often continue over time, and increase with increased dieting. Over time, dieters lose touch with their internal hunger regulatory system, and normal eating becomes increasingly difficult. Regained weight, often with added pounds, is a natural and predictable outcome.

**Precautions should be taken for students with asthma or other lung disorders.*

Kathy Kater is a psychotherapist who has treated body image, eating, fitness, and weight disorders for 27 years. She developed the Healthy Body Image curriculum and a companion book for parents, Real Kids Come in All Sizes: Ten Essential Lessons to Build Your Child's Body Esteem. Her website is: www.bodyimagehealth.org.