

A THUMB OF PEANUT BUTTER AND THREE FINGERS OF FRIES

BY ELLEN SHAPIRO



*How a Carnegie Mellon professor,
her design students, and a group
of Pittsburgh fifth graders teamed up with
local doctors and community
officials to create a new model for
healthy eating education.*

CALL IT HANDS-ON nutrition. In five Pittsburgh schools that serve lower-income communities, 400 fifth graders are measuring portion sizes with their fingers and learning that Elvis Pretzley, a cartoon pretzel rod with a big grin and an over-the-top pompadour, is more wholesome than the Fry Girls, a trio of greasy, gossiping cheese puffs. And they're learning how to make their own healthy snacks: Fill a celery stick with one thumb's worth of peanut butter and top it with two fingers of raisins.

The Fitwits program, a multidisciplinary collaboration among doctors, teachers, social workers, and design stu-

dents at Carnegie Mellon University, is directed by associate professor Kristin Hughes, who teaches information design and typography at CMU's School of Design. Hughes and her students in the communication and industrial design departments have developed learning tools for nutrition, portion size, and exercise that include 200 character and recipe cards, a 44-page pocket-size guide for parents, an intervention tool for medical professionals to use at checkups, and the fitwits.org website.

"Our goal is to help prevent child obesity," says Hughes, who focuses her research and professional practice on

useful design methods for community and civic engagement. The solution, she says, is an exercise in visual literacy with a character-based narrative and emphasis on children's own experiences and culture. "Hands and fingers as measuring tools are always accessible," she notes.

PREVIOUS PAGE: Papercraft cutouts of the Fitwit and Nitwit characters.

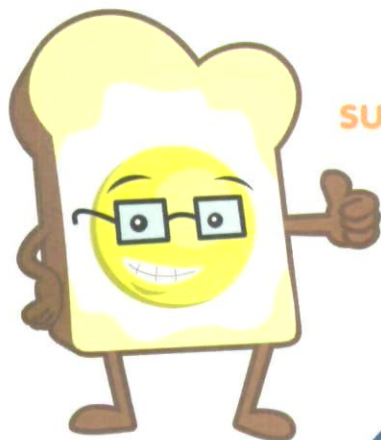
CLOCKWISE FROM LEFT: Larger-than-life-size version of the memory game made for the Supermarket Scavenger Hunt; students from Fort Pitt Accelerated Academy, Pittsburgh, make new Fitwits and Nitwits; a group tests Citylife, a new game launching this summer that will go in doctors' waiting rooms. The game helps kids understand the challenges and decisions they face every day regarding nutrition and physical activity.



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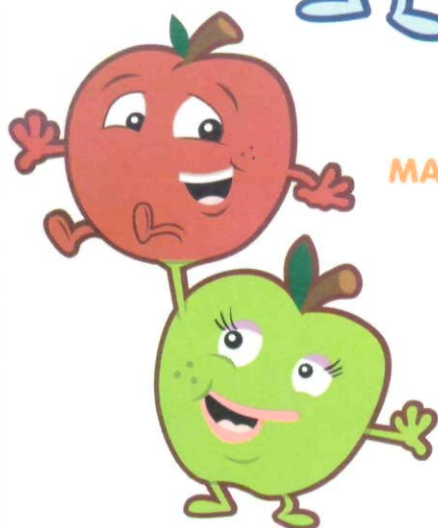
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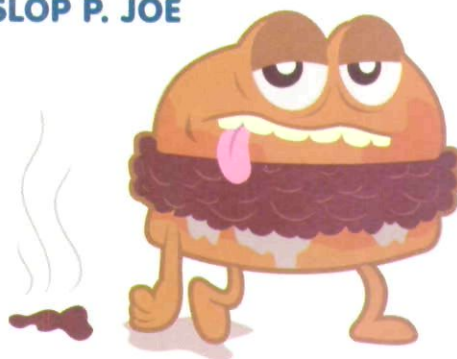
MOE FLOW



MAC AND TASHA



SLOP P. JOE



LITTLE DRIPPER



SQUIRT



DEEP DISH DON



< FITWITS
NITWITS >

The Fitwits (left) and Nitwits (right), illustrated by Nathan Mazur, appear on character cards that list their relatable, human qualities on the back. Bling Bling, the name given to a carton of milk, has positive "hobbies," for instance, including "Girls at Recess" and baseball.



LEFT: Kids playing memory game at Fort Pitt Accelerated Academy, Pittsburgh.

OPPOSITE: Elvis Pretzley greeting his fans during the Supermarket Scavenger Hunt.

“We would have never thought of Barfenstein as the name of a frosted toaster pastry, but that’s what the kids came up with.”

Kristin Hughes, Carnegie Mellon associate professor

Fitwits started in 2006 after the success of Explanatoids—a gender-neutral math and science program that Hughes developed using cartoon characters, bright colors, and simple language—sparked the interest of Pittsburgh health professionals who were looking for new ways to reach pre-adolescents with nutrition information. They invited Hughes and a CMU student team to Children’s Hospital Weight Management Clinic to observe doctors and nutritionists as they talked to families about weight control. The designers immediately saw the problem. “It was clear

from the body language of the clients that their weight was a source of embarrassment and discomfort,” Hughes recalls. “But the presentation of the material—clients were given lists of goals and recommended foods and charts of plate configurations—inhibited understanding, so they didn’t adopt them. At follow-up sessions, clients told us they kept the materials in a drawer, out of sight.” Hughes and her team began trying to determine how to speak a friendly, accessible visual language that would better communicate doctors’ recommendations.

The team included physicians from the University of Pennsylvania Medical Center, health department and public school coordinators, a professor of public health, nutritionists, and social workers. “No one hired us,” Hughes points out. “My students and I pulled together the resources. The health and education professionals were very open to helping develop and test prototypes, and we were flexible and willing to meet them on their time, like having 6:30 a.m. meetings before grand rounds.”

As it turns out, the most important members of the research team were the kids themselves. During the program’s eight-month research phase, a focus group of 50 fifth graders at the Fort Pitt Accelerated Academy and the Pittsburgh Montessori School came up with the names for the “Fitwits” and “Nitwits” characters. Countering the television universe that advertises sugary juices for children, the program features a purple grape juice box called Little Dropper, a sadsack Nitwit who brags to everyone that he’s a champion boxer but is all talk. Sunny Yolk, on the other hand, is a Fitwit egg on toast “who’s healthy and always has enough energy to finish his homework and go out to play.” Barfenstein is a Nitwit breakfast food who wakes up every morning with a sugar buzz. “We would have never thought of Barfenstein as the name of a frosted toaster pastry, but that’s what the kids came up with, and it resonates with them,” Hughes explains. “The children, through their feedback, became co-creators of the materials.”

The program is currently supported by a \$213,000 grant from Heinz Endowments, which allowed the team to hire Joshua Franzos to photograph the children playing adult roles for the parent guide. The team also commissioned Nathan Mazur, a cartoonist who has worked for

Disney, to draw the characters and animate them for the website. The grant has provided enough funding to print a set of game cards for every child who participates through December.

The Fitwits website, which has started to attract visitors beyond the Pittsburgh target audience, is organized into “play,” “make,” “tools,” and “meet,” where the Fitwits and Nitwits have Facebook-style profiles listing their hobbies along with sugar and fat ratings. The tab for recipes features a cool and healthy-looking creature made from cucumber slices and cherry tomatoes toothpicked to a mushroom. Under “make,” there are papercraft activities. The overall design, art-directed by Hughes, is bright and welcoming with lower-case, VAG Rounded type and a color palette of magenta, pink, green, yellow, orange, and blue.

Hughes is working on additional grant proposals to the National Institutes of Health in order to launch the program on a national level, to develop Spanish and Cantonese versions, and to create culturally specific games for Native American and rural children. “The character cards reflect the ideas of urban children in Pittsburgh,” she says, so the text may need to be modified to appeal to other demographic and social groups.

Ann McGaffey, medical director of the UPMC St. Margaret Family Health Center, who coordinates the health partnerships with the participating schools, is

enthusiastic about the results so far. “‘Obesity’ is usually a pejorative word, especially when applied to children,” she says. “But this program has successfully parlayed it into a real conversation in the schools, medical offices, and community. Mothers have told me that their kids are eating apples for snacks and drinking more milk.” She and Hughes are collecting the thank-you notes kids have written. “I will start eating better and thank you for helping me,” wrote one fifth grader. Another wrote: “It was fun, and I learned that you can only eat three fingers worth of fries.” **P**



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