



Obesity in American schools

In the film *Willy Wonka and the Chocolate Factory*, there is a rather rotund character by the name of Augustus Gloop. Pretty much obsessed with eating (especially chocolate), Augustus ends up following his belly instead of his brains and finds himself eventually stuck in a chocolate transportation pipe. If you've watched the movie, you know he is dismissed from the premises and loses his chance to win the lifetime supply of chocolate. Perhaps that's a good thing, in his case.

However, a walk down a high school hallway in Oklahoma will show that nearly 20% of the students suffer from obesity (according to the 2009 Oklahoma Youth Risk Behavior Survey). With one in every 5 students being obese, the reasoning of hereditary onset does not cut it. The problem is very real and very dangerous and cannot be ignored any longer. While an individual's self-image is important, obesity raises many other serious health risks well into a student's adulthood. Thankfully, there are ways we can fight this epidemic's progression.

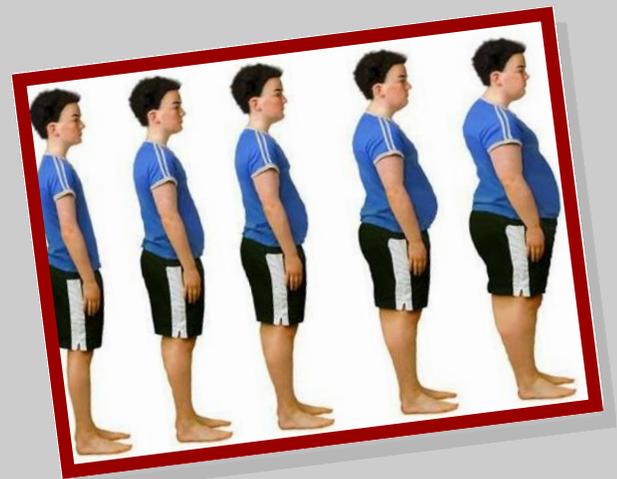
The Silent Epidemic [continued]

One of the causes of obesity in children is the nutrition (or lack thereof) provided by the schools. Malnutrition is the lack of essential vitamins and minerals in a person's diet and can affect an obese student as much as a famished individual. Cheap foods made with high fructose corn syrup, "instant" ingredients, and high fat/carb/sugar content all contribute to the problem. Coincidentally, these high sugar/fat foods end up giving the student a "sugar rush" after eating, immediately followed by a crash, coincidentally when your post-lunch class is starting. Providing healthy, fresh fruits and vegetables and simply replacing butter with a light amount of oil could pay dividends not only in a student's health but also their academic success. Many schools have even started their own student-tended gardens to provide these favorable alternatives.

Another cause of obesity, which cannot be ignored, is stress. Many individuals eat more when they're depressed or stressed - and I don't mean eat more celery or berries. While this junk food eating temporarily takes the edge off, it's a downward spiral. In the words of a character from Austin Powers, "I eat because I'm unhappy, and I'm unhappy because I eat." By helping students cope with the stress of academics and offering sound, applicable ways to relieve it, teachers can play a major part in countering obesity. Obesity and stress, like any other illness, can be avoided through prevention and you can be that prevention.

Finally, by far, the major cause of obesity is simply inactivity. Simple activities like having "walk and talks" for class discussions, biking to school when pos-

sible, or engaging your students in a huge scavenger hunt (with the clues pertaining to your subject area), can pay dividends in that student's future health. Obesity is not a joking matter, especially in our school systems. I encourage you to find ways to promote healthy lifestyles among your students (or future students) and play your part in fighting this epidemic!



Teaching MATH through everything!

The creative side of logic

So many of the individuals who read my last blog told me that they wanted to know more about integrating mathematics in different thought avenues. Well, after doing some more captivating research and working my left-brain, I came up with the following ideas. Replicate them, recreate them, and make them yours! Only you know what can touch the students in your classrooms, so adapt it to your needs!



Mathematics is everywhere!-All you have to do is look!

Teaching MATH through everything! [continued]

The creative side of logic

Economics: By the time a student enters 1st grade, they have usually developed some system of values and really that's the basis of economics! From money transactions to international relations to choices that affect the whole world, they all are based on individual and national values. Organize a "community" in your elementary classrooms where the students are "paid" for coming to class and other desired outcomes, but also have to pay for "renting their seat," "buying a pencil or a hall pass," or even a fine for "talking during class." Fast forward to high school and you can begin to use the free service of *Yahoo Finance* to teach about stocks, budgeting, and other useful, professional facets of economics!



Food: Food – it's a fact of life. So use it! Health education aside, it can be used with mathematics in so many ways! Many teachers already use it to help students learn fractions by cutting up fruits, etc. But you could even step it up a notch! By making a pizza, for instance, you not only incorporate fractions in cutting the main ingredients (pepperoni, olives, mushrooms, etc.) but also in the supplemental ingredients (proportioning the water and the flour for the dough, the spices for the sauce, etc.). Then, once you're done – hey! You have a pizza you can use for even more hands-on, yummy learning! And this same exercise could be used in the high school by figuring the diameter and measurements of the pizza and subsequent ingredients, using calculus to determine how big it will get in the oven as it gets hotter, or solving



simple, algebraic variable problems! What other ways can you think of?

Fantasy and Imagination: Einstein believed imagination was more important than knowledge. Be outlandish in your teachings and examples! Have pre-k students count the number of brooms in a picture of Disney's *The Sorcerer's Apprentice* and identify the colors in the picture. You could then have them draw pictures of brooms made of all those different colors! Middle and high school students could do projects pertaining to them "living on another planet" or "being able to fly everywhere." When it comes to imagination, the more outrageous it is, the more it will stick.



Social Networking: "If you found 81 new friends on Facebook but you could only send 3 friend requests per day, how many days would it take for you send them all?" It's that easy! By simply inserting something that they probably see more than your classroom, it will help you subconsciously reinforce those principles. And this can be taken up through all levels of math! Use it with exponential lessons by investigating the growth of chain "tweets" that you send to friends and they pass it on, etc. You could also introduce the field of *graph theory* to upper level high schoolers by investigating the mathematics of networks. And, as stated, their constant exposure to these social networks reinforces what they're learning, whether consciously or subconsciously.

