

Innovate

News from the 21st Century Fund's Office of Ingenuity



What's Next? What's Now?

IN his landmark book, *The End of Education* (1996), Neil Postman asks the provocative question, “What is the goal of the American high school education system? More specifically, what is the goal of our high school education system **right now?**” During the 19th and early 20th centuries, a central goal of public schools in America was to prepare young citizens (many of them recent arrivals from Europe) to be successful in the workplaces that were a part of the Industrial Age. Students needed to learn the importance of routine and standardization, of personal responsibility and accountability, and of clarity and precision in

speaking, writing, and listening. Starting in about 1950, schools began to shift their focus to the skills of what is called the “Information Age”: the mastery of logic, mathematics, science, higher-level thinking, and, eventually, computers and other technologies. If the goal of many public high schools in 1900 was to get its students into respectable jobs, the goal of many public high schools in 2000 was to get its students into respectable colleges, as college was now understood as the gateway to well-regarded and secure Information Age jobs.

But as we move forward into the 21st century, the familiar ground is

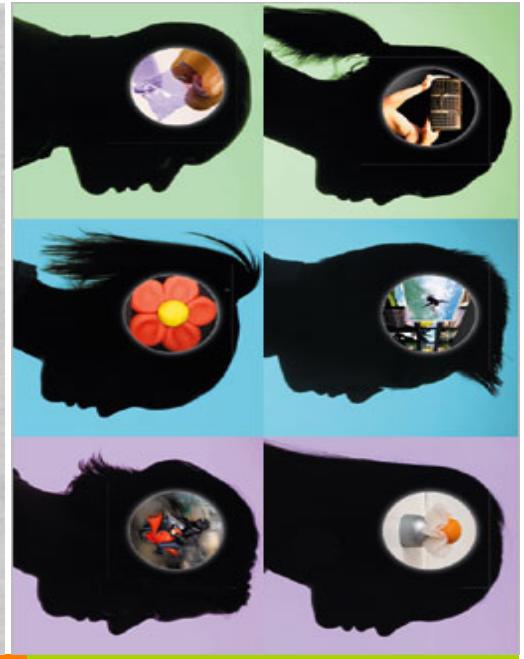
shifting. According to business expert, Dan Pink, we've begun to shift from the Information Age to what he calls the “Conceptual Age,” an age where the essential skills for success in the US (beyond the traditional ones) include empathy, problem solving, imagination, and innovation. As more and more students are attending college, we at BHS are acutely aware that the stress caused by competition and the availability of non-traditional learning on the Web and elsewhere are pushing more and more students to desire more than the conventional, college-prep curriculum. Students--and parents--are demanding more.

This is where the 21st Century Fund's Office of Ingenuity and the Innovation Fellow come in.

Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results.

John Dewey

meetville.com



Often innovation is taken to mean “technological innovation”: the new iPhone, the driverless car, the latest app or time-saving device. But technological innovation is only one form of innovation.

This year, as the Innovation Fellow, I will be focusing my efforts on innovation as it relates to Postman’s “end of education.” In fact, I’d like to propose a new way to think about the end of education at Brookline High. In the 19th century, the model for school was the factory; for the 21st century, I’d like us to start thinking about BHS as a “Dream Factory”—a place where we help students develop and nurture their dreams—their **own** dreams—so that they can find rich, fulfilling, “conceptual age” challenges for themselves, challenges that enrich them and enrich the community as a whole.

As you will see documented

in this newsletter, the goal for this year is to work with teachers and students to create more ways for students to do work that truly matters to them, work that grows out of their own interests and passions, work that they choose to do.

For the past several years at BHS, we’ve spoken about the notion of “student-directed learning,” and my hope is that these projects will allow for more of this: opportunities for students to design, initiate, and evaluate their own learning. Certainly, in this work, students will be bringing in much of what they have learned in their current BHS classes. But, as much as is possible, these projects will grow out of students own dreams—dreams about learning new things, dreams about solving new problems, dreams about exploring new careers.

This Dream Factory is not where dreams are produced; our students already have dreams. Instead, this Dream Factory is where dreams are

explored and where they can become the driving force—for a part of a student’s day or week or month—in what a student does with his or her time.

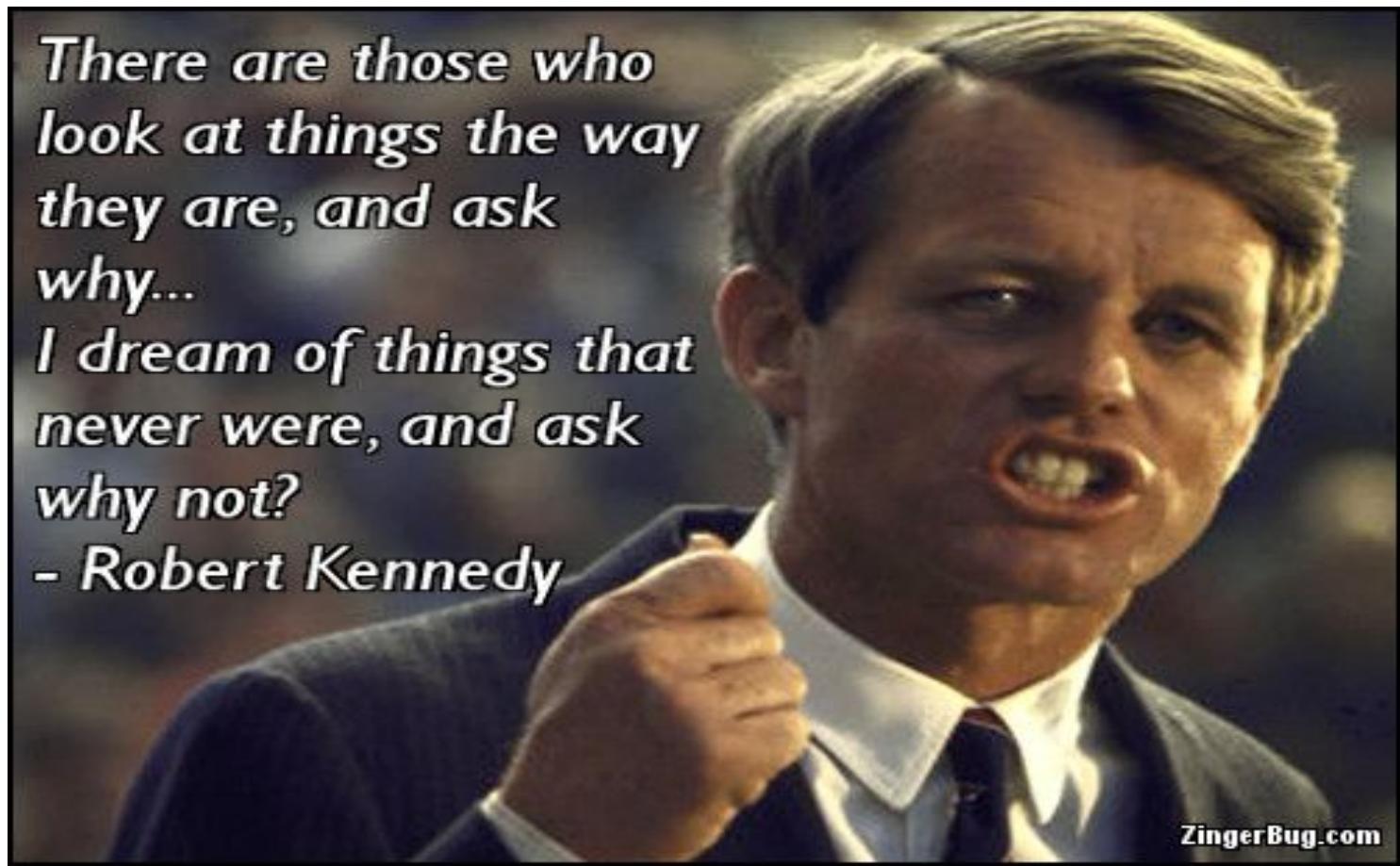
As you read through these project descriptions, be thinking about whether any of them touch upon an area where you have some expertise. We need you! The students need you! If you can think of a way to support any of these projects—or have suggestions of other projects we might consider (other dreams that we’ve not found out about yet)—please let me know (Elon.Fischer@psbma.org).

Thank you for your interest in these programs and for any support you can provide. Thanks to the support of the 21st Century Fund, we are ready to make school-as-Dream-Factory a reality. Please come along for the ride.

There are those who look at things the way they are, and ask why...

I dream of things that never were, and ask why not?

- Robert Kennedy



ZingerBug.com

Brookline Bike Repair:

Bikes Not Bombs has developed a successful model that combines bike repair, youth training, and social activism. We plan to adopt their model and make it work for Brookline. This project will be lead by Elijah Evans (ACE Social Studies--and a long-time employee and current Board Member at BnB) and Glen Gurner (CTE) and perhaps partner with the Brookline Teen Center and Bamboo Bikes Brookline to give BHS students opportunities to learn about bike repair and social

activism and to provide the Brookline community with a high quality resource for bike servicing and used bike purchase and sale.

BHS Music label: Four current BHS students—Ben Gordon, Felix Smith, Carson Murphy, and Evan Legere—are working to start a BHS music production company to record, produce, and distribute music by BHS students. This group is calling itself “Studio 410” (after the room where they record) and hope to have their first

tracks on the airwaves (cyberwaves?) by mid-October. These students (and others who join their team) will receive training from former BHS students who are currently working in the music industry as well as local promoters, who have agreed to serve as consultants. In addition, BIG will be funding and creating a true audio recording studio for this project and for other students who wish to lay down their tracks.

Making Sense of Town Data: Math teacher Kathryn Kanter-Caruso will be teaming up with Austin Faison, Director of Data Analysis for the Town of Brookline, to transform reams and reams of town data into useful and compelling data visualizations, which will make this data available and usable in ways it has not been in the past. We also hope to be soon working with Maria Morelli, the Town's Senior Planner for Community Development, using some of her department's environmental data in support of Town-wide studies and climate actions.



Virtual Reality:

At their first meeting, students and teachers met at the BIG Virtual Reality Lab to discuss ways that students could be trained to develop VR programs and applications, and they brainstormed ways that teachers--now--might

begin to incorporate VR and augmented reality tools into their classrooms (AND the group played VR games involving zombies). With the help of BHS librarians Ann Collins and Shelley Mains, this group will be holding a workshop for BHS faculty to discuss ways that teachers could take the first steps into integrating VR tools into the classroom, focusing specifically on the VR goggles (similar to Google's "cardboard" viewer) that the library purchased last Spring as well as 360 degree cameras, which are available at BIG. In addition, we've arranged for BIG to offer an after-school class in 360 camera use and video production on Monday, October 17th. We're hoping that this will be the kick-off to BIG's newly-envisioned Virtual Reality Academy, a program that will offer classes, opportunities, and resources to BHS (and the Brookline community), starting in the next few months.

Cooking-for-life:

This project involves BHS Entrepreneurship student who hope to extend the school's current cooking class offerings to include the more

practical needs of the entire BHS community. In phase one of this project, we'll be piloting a basic "how to shop for staples and cook for a family" workshop for BHS students. The longer terms goals for this program include offering more courses that help students design low-cost, nutritious meals for their families; buying in bulk and preserving; and planning weekly meal plans.

Wi-fi for Public Housing: BHS Junior and member of the Steps-to-Success advisory board, Penelope Cruz, met with Kevin Stokes, the Town's CIO, to re-invigorate talks between the Town and local cable internet providers concerning the possibility of providing free or low-cost internet service to all PSB students living in Brookline Public Housing. Now that connectivity is a virtual essential for school success, closing this digital divide is an even more pressing problem. We hope to hear back from the Town in the next few weeks.

Mentoring into Careers: With the help of Sara Reese, BHS Career Center director,

we will be piloting a career (Continued)

mentoring program for a small group of Juniors (8-10) in the Steps to Success program. This program will provide one-to-one mentoring from local residents around issues that the students, themselves, identify as related to their college and career choices.



Saving Brookline Water (and Dollars):

Ben Thomas, a Brookline senior, has developed a low-cost water use sensor that can be installed via the pipe connections in most of the bathroom sinks on the BHS campus. These sensors record the amount of water used each time the sink is turned on, display the data to the sink's user, and captures the data on a server that can be used to observe trends, outliers, and problems. This data, Thomas believes, will enable BHS to dramatically curb its water use, preserving both this increasingly scarce resource and saving the Town money.

BHS Cafeteria Recycling and Composting:

On a visit to Cambridge Ringe and Latin this past June, Itimar Zik and Kobe Giglietti saw a model for what could be the future for the BHS school cafeteria's waste management, one that closely resembles what is currently in place at Whole Foods, local restaurants, and



elsewhere: facilities for users to self-sort their food waste. Currently CRL has a simple system of bins for students and faculty to dump recyclables, compostable materials, and trash, which saves the town money and keeps tons of waste out of landfills--a major source of methane gas emissions. We see no reason why BHS could not duplicate (and surpass!) this model for waste disposal.

BHS Food Program:

Currently, BHS hosts a Food Justice club, a small but dedicated group of students

who meet weekly to discuss issues related to hunger, nutrition, sustainability, and action. The group feels strongly that this club needs to be much more than a small, informal group. Instead, they would like to create a far more robust program that can support food-related classes, social action, and change. To this end, we are working together [with special leadership from Roger Grande and Rachel Gubar (BHS Senior)] to host a BHS "Food Summit" in October. This Summit will bring together leaders in existing, local, food education programs to help us think about designing the program we desire and making it a reality.

OpenSource BHS:

What if we turned directly to BHS students (and parents, and community members...and beyond) to help us solve some of BHS's most pressing problems? What if we crowd-sourced student-initiated challenges so as to tap into the many great,

creative thinkers that move through this building, this Town, this world? This is the idea behind OpenSource BHS. Using the highly successful model of OpenIDEO, this project will begin in October of this year by opening up the question, “How can we improve the homework experience for all BHS students?” to one class of BHS students using the school’s social media tool, “Canvas.” Our goal is to start with one class, eventually open it up to the entire BHS student (and staff) population, and then find ways to bring in members of the larger Brookline community (and beyond) to help us solve the problems students pose. In addition, we’re working on a way to try out this platform with a 5th grade class at The Lincoln School later in the Fall.

BHS Design Thinking Lab

“Design Thinking” is a process of innovation used by companies such as IDEO, Fidelity, Blue Cross and Lego as well as a variety of schools, non-profits, and educational organizations to solve problems. With the help of Lucy Schacter from Fidelity Labs, we will be creating a Design Thinking

Lab for BHS, a place where classes, teachers, and individual students can come to learn about Design Thinking and to work on innovative projects. This lab will provide the unifying tools and processes for a wide variety of project-based classes and programs that are new to the High School, including EPIC, Global Leadership, and Entrepreneurship—as well as supporting existing classes that are moving towards a more project-based approach. In many ways, this Lab might serve as a catalyst for innovation at BHS.

Please spread the word!

Please support these projects!

Help the Office of Ingenuity bring (more) innovation to BHS!

Questions?

Ideas?

Want to help?

Contact:

Elon_Fischer@psbma.org

Initial Project ideas for BHS Entrepreneurship class:

How might we...

- Improve students’ experiences with community service?
- Support students who are interested in developing their own businesses while at BHS?
- Improve students’ commuting experience?
- Improve the way students learn about food, nutrition, and meal preparation?
- Improve the way students use and access mental health services at BHS?
- Redesign the way students and staff receive information (about meetings, sports practices, events, schedule changes, etc.) at BHS?
- Make composting and recycling an easier process of students and staff at BHS?
- Better design and furnish outdoor spaces at BHS to better suit students’ needs?