Taking the Math PBL Challenge!

Workshop deepens teachers’ understanding of Project Based Learning processes in Math

The subject of mathematics offers challenges for teachers in making the leap to PBL learning, but this summer, math teachers from throughout the network gathered for a three-day workshop to help bring project based learning into their math classes.

Twenty one teachers from 11 schools attended. The sessions were led by trainer Megan Pacheco, who researched and created the extensive program, said Susan Schilling, New Tech Foundation CEO.

During the sessions, teachers experienced a challenging math PBL unit from the perspective of a student. “I wrote a calculus project that the teachers completed as if they were students and had to present their work to their peers,” Pacheco said.

“The teachers had to write group contracts, fill out project pacing charts, do daily journals, fill out collaboration evaluations, etc. The goal was to show teachers how a math class works and feels like in a PBL environment,” Pacheco said. “PBL is very new and different for math teachers. As such, math teachers typically struggle with implementing it and often want to know what it looks like.”

“Teachers also had the opportunity to engage in discussions on classroom practices and worked on developing their own curriculum,” Pacheco said. The teachers created a math curriculum database allowing them to share resources, projects, activities and ideas.

The teachers who attended reported that they felt better prepared for fall and using PBL in their classrooms.

“This workshop was different than any other math workshops I have attended, as we were all actively involved and saw first hand how PBL can work in math,” said Deepa Pai, math teacher from Jordan New Tech in Los Angeles.

“I think that this workshop gave me a deeper appreciation of why PBL is the way to go. This experience will help me in those future times when I get overwhelmed,” said Senna Davis, Sacramento New Tech High.

GETTING OUT THE VOTE: Napa, California

Your YES vote on MEASURE G will deliver science, technology, and safety upgrades

 Voters in November will have the chance to change Napa’s overcrowded high schools by voting for Measure G, which will help build a new high school in American Canyon and many other improvements at our own New Technology High School as well as Napa and Vintage Highs.

For New Tech High, the bond will raise $10 million to $12 million to renovate the main building, a 22,000-square-foot former elementary school, as well as improve science labs, upgrade computer technology, and add an 8-classroom permanent building, alleviating the overcrowded portable units now in use.

Other benefits stemming from Measure G are improved health and safety conditions, security, disabled access and seismic upgrades to our school’s aging athletic facilities.

None of the money raised would be passed on to the state but would be used locally. An independent citizen oversight committee would keep an eye on spending and annual expenditures would be subject to an audit.

Please help our schools. Vote for Measure G!
Sharon Oldham joins Foundation as Director of Replication

New Technology Foundation’s top goal is to replicate the NTHS model at schools all over the country, delivering our model’s 21st century education to as many students as possible. To help achieve that goal, the foundation has a new Director of Replication, Sharon Oldham, who brings a strong educational and business-community coalition building background to the job as well as a passion for NewTech’s potential.

Oldham started her career teaching high school mathematics and computer science before spending 23 years as a high school administrator in Hayward. She then worked as a mathematics and assessment coordinator with the Alameda County Office of Education, providing staff development around new initiatives focused on school improvement.

In 1996 Oldham became executive director of BaySCAN, a non-profit that provided resources and networking aid to California schools building partnerships with businesses to improve learning.

Through those efforts, she learned about New Tech High in Napa. Last spring she was hired to bring her skills to NewTech.

“I was thrilled to come work with the New Technology Foundation. For me it is the ideal job opportunity because of the relationships that are built with business, community and higher education partners who are so completely invested in partnering with schools and parents,” Oldham said.

As Director of Replication, she will be helping groups who want to adopt the NewTech model by providing a myriad of support resources to get them ready to open and off to a successful start.

“I am part of a highly experienced and passionate team of New Tech Foundation people who create unique plans and strategies that provide assistance to these stakeholders who come from all over the county,” she said.

“It is the most exciting job I have ever had as it brings together high level decision makers who are committed to bringing 21st century skills to all students,” Oldham said.

“It is exhilarating to be a part of teams so invested in providing resources to get them ready to open and off to a successful start.

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Geo-Literacy class delves into complex societal issues near & far

The melding of literature classics and geography blends seamlessly in the freshman class of Geo-Literacy at Sacramento New Tech High School, as students learn about culture and place, say teachers Peter Newman and Christine Coit.

“More importantly it is the study of the interaction between people and the places they live. The scope of the class ranges from local to global. This means that we start by examining our school and end by examining a continent and the people who live there," they said.

Christine has worked at Sac New Tech three years and Peter for two. As team teachers, Newman leads the social science content and Coit leads the English–Language Arts content.

Students soon will begin a project involving the novel Of Mice and Men. “From the social science standpoint, we look at labor laws and apply critical thinking in the writing of a legal brief, as well as studying the geography of California,” Newman said. “From the English–Language Arts standpoint, we are composing persuasive writing as well as a response to the literature,” the teachers said.

In the project, students are given an entry document that is a letter from the director of the Department of Industrial Relations—notification of a ranch in Salinas, California where current labor laws are being potentially broken. Their job is to investigate, come to a decision on whether these laws are being broken, and write their conclusions in a legal brief.

In the brief, students support the claims of mistreatment using California labor laws and their own thoughts as well as evidence from the book. Students will come together as a group and prepare to meet with a judge. The presentation solely is based on the student’s ability to answer any questions that this judge poses in order to validate their brief, the teachers said.

Law students come from UC Davis for the day to help out as judges.

PBL IN ACTION

Other Geo-Literacy projects:

- Students will create a documentary film working with the theme of disillusionment discussed in the novel A Walk Across America.

- Students will put together a cookbook that demonstrates the historical change in culture on a colonized continent.

- Students will create a piece of art with an artist's statement that demonstrates a symbol in the novel Lord of the Flies.

This project has become a right of passage, as it brings the class full circle and gets them to critically think about human nature and its effects on the place and the people around them.

Tech Tools for Students

Besides the content area, one of the main jobs of 9th grade Language Arts teachers is to establish a solid PBL foundation for the freshmen class.

“We push them on issues of time management, organization, responsibility, collaboration, professionalism, and having fun. We also get them started with the basics of Lotus Notes—workspace, discussion databases, etc.—and the basic use of technology. Finally, we get them used to how projects run, and give them hints for completing these projects that they can take with them,” said teachers Peter Newman and Christine Coit.
Da Vinci High Grads awarded Rotary exchange scholarship

Year-long exchange program offers Davis, California grads global life-experience

Three graduates from Da Vinci High School of Davis are studying abroad, after being honored by the Rotary Youth Exchange Program. Kathleen Dycaico is in Garca, Brazil, Ruby Kapka is in Fulda, Germany and Kasra Jessop-Shakikhan is in Kalmar, Sweden.

As seniors last year at Da Vinci, the three friends all applied for the program. Typically, two are chosen but the outstanding achievements of the three couldn’t be ignored and the club picked them all.

The application process was rigorous, including many questions, essays, doctor’s forms and interviews, the students said.

The New Tech grads have been in their countries with host families about one month. “Our exchange lasts for one year and we move every four months to a new host family,” Kathleen said. “I’m loving Brasil so far, though obviously there have been some hard times, like not knowing Portuguese.”

“I think that this exchange is perfect for New Tech students like us,” she said. “Students that attend New Tech schools are already interested in alternative education options, and this year abroad is most definitely an education. Ruby, Kas and I were all more interested in getting life experience and cultural exchange than going right to college, but it doesn’t hurt our chances for getting in. Most colleges actually look favorably on an exchange year because of the diversity that student would bring to the campus. Also, this exchange puts emphasis on being a cultural ambassador and representing your country in the best light, which I think is extremely important for the U.S. with our current state of international relations,” Kathleen said.

Ruby is currently living in a small town in the center of Germany, and is quickly picking up the language and immersing herself in life there.

“I was really excited to be picked to go, I knew that it would be a really different experience than just going straight to college, which I did not want to do,” said Ruby. “This year is all about finding out what is true to me, what I want to do with myself (or maybe more importantly what I don’t want to do with myself), and engaging my brain in a big way with learning a language that I had never tried to speak a word of before.”

Kas credited Da Vinci with giving him the life skills and learning that helped him achieve this international exchange program.

“How has Da Vinci helped me get to where I am today? That question can be easily answered with one word: EVERYTHING! They helped with self-confidence and how to present oneself, etc. That’s what Rotary looks for in U.S. students going abroad—a respectful manner, up with the times, and able to cope with a new style of learning. There is no other school that I would have rather gone to.”

Interships help students match interests with careers

Senior NewTech student Robert Skelton spent 56 hours this summer working at a Napa law firm, learning the job and bringing his technological know-how to help a lawyer there prepare for trial.

Skelton’s efforts benefited the firm, Gravett and Frater, and offered him insight into the world of law and criminal justice.

“My role in this company was mainly a combination of Research Assistant and Tech Support. My four work objectives were to solve one client-related problem, prepare a PowerPoint presentation and template, assist with preparation for trial and set up litigation tracking forms,” said Skelton, then 17, now 18.

Attorney Elizabeth Frater said his help made a huge difference.

“With minimal direction, Robert was able to take my ideas and design a power point presentation of my case with interesting animation.”

— Elizabeth Frater, Attorney, Gravett & Frater

“I am a trial lawyer with loads of imagination, but little technical talent or patience with cataloging items of evidence, especially messy documents,” Frater said. “With minimal direction, Robert was able to take my ideas and design a PowerPoint presentation of my case with interesting animation.”

Frater said Skelton also was thorough and diligent about organizing and cross-referencing all of the exhibits that support our case. “Robert is the second New Tech intern that our firm has utilized to assist us with trial preparation, and the results have been excellent,” Frater said.

New Tech requires each senior to complete a 50-hour internship prior to graduation. The program is a mutually beneficial one, aimed at helping students prepare for the work world while perhaps giving them a glimpse at a possible career. It also benefits the community and forges a stronger connection between New Tech High and the business community.

“This internship will really keep you moving, I highly recommend it for anyone who is thinking they might want a career in law,” Skelton said. “For me, I have decided that being a lawyer is not my thing, however, I am still interested in law itself and its applications and I do plan to pursue a career in the field of criminal justice,” he said.

For more information on the Internship program at Napa New Tech High, please contact Heidi Kobylka at (707) 259-8518 or by email, hkobylka@newtechhigh.org.
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Schools in the New Technology Network

NORTHERN CALIFORNIA
New Technology High School, Napa
Anderson New Technology High School, Anderson
Technology High School, Rohnert Park
Mare Island Technology (MIT) Academy High School, Vallejo
Sacramento New Technology High School, Sacramento
Leonardo DaVinci High School, Davis
Castlemont Business & Information Technology School, Oakland

SOUTHERN CALIFORNIA
Arleta New Technology High School for Environmental Studies, Los Angeles NEW!
Jordan New Technology High School, Los Angeles NEW!
New Technology High School for Student Empowerment, Los Angeles NEW!
Los Angeles School of Global Studies, Los Angeles NEW!

ALASKA
Highland Tech High, Anchorage

LOUISIANA
Patrick F. Taylor Science & Technology Academy, Jefferson Parish

COLORADO
Skyview New Technology High School, Thornton

ILLINOIS
Little Village Infinity Math, Science and Technology High School – a New Technology High School, Chicago

OREGON
BizTech High School, Portland
North Eugene School of IDEaS, Eugene NEW!

NORTH CAROLINA
CAMTECH High School, Camden NEW!
New Technology High School at Garinger, Charlotte NEW!
Robeson County IT High School, Pembroke NEW!
Cherokee New Technology High School, Cherokee NEW!
Scotland High School of Math, Science and Technology, Laurinburg NEW!
East Wake School of Integrated Technology, Wendell NEW!

TEXAS
Akins New Technology High School, Austin NEW!

Boardmember Profile:
Stephanie Chu

Stephanie Chu, 25, is a NTHS graduate and member of the New Tech Foundation’s Board of Directors, as well as a new business owner.

Tell us about your background and how you got to NTHS
I was born and raised in Vallejo and transferred to New Technology High School in 1997. I followed my big sister, Jennifer, to NTHS, who was in the first graduating class of 1998. I graduated as Valedictorian in 1999 and went on to study at Cal Poly, San Luis Obispo where I received a Bachelor of Science in Graphic Communication with a concentration in Electronic Publishing and Digital Imaging in 2004.

How did you use your Degree from Cal Poly?
After graduating from college I returned to work full-time in Napa at Net-Flow Corporation, where I did my internship for my NTHS requirement. A few months ago I started my own design and development service for Web and print, something I’ve wanted to do since my time at NTHS. I’ve worked with many different types of clients so far—ranging from art galleries, fashion companies, screen printers, software firms, singers all the way to partnering with various design firms who provide me with a consistent flow of contract projects.

How did NTHS help you prepare for your career?
I really do think that NTHS is preparing kids to do just this—to find out what they’re really made of and to take risks in business and career to see how far they can really go. Being thrown into the internship program helped me figure out what I actually like to do.

New Tech teachers did a good job of proving that the journey of success is never done entirely on one’s own—there’s always a team beside you—but, ultimately, the responsibility to do well in college, work and life is really up to you. The sooner students are prepared for this, the better, and NTHS did a good job in preparing me.

How did you come to be on the New Tech Foundation board and what are your goals?
Shortly after returning to Napa, I joined the NTF board. As a graduate I have a special interest in keeping Alumni connected to the school and as president of the Alumni Association, I’ve been helping to develop the association and urging more alumni to get involved with New Tech High School.

“As a board member, my goals are to support NewTech students however they need me. I’m responsible for getting Alumni involved with current events at the school, and attending any function that needs an Alumni rep. Our ultimate goal is to formally put together the Association that will have more official members with leadership positions, and this association will support the students with advice, mentoring, and financial help,” Chu said.

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