Experiential Learning Programs
Stony Brook University

Stony Brook University is committed to experiential learning and encourages students to participate in research, internships, service learning and project based learning.

● Overview of Project Based Learning and Service Learning.

● Overview of the Tech PREP and STEM Tech programs that I co-founded for high needs communities and underserved students. Tech PREP is a academic program with hands-on learning and role models. STEM Tech uses a service learning pedagogy and is student driven.

● Overview of Mosquitoes Be Gone and The Humanology Project.

Problem Based Learning ***Service -Learning ***Research*** Internships

Personal Outcomes

Greater interpersonal development, particularly the ability to work well in diverse groups, improvement of leadership and communication skills

Social Outcomes
Develops cultural sensitivity.
Greater involvement in community service after graduation
Teaches a vehicle for improving the world in which we live

David Kolb's Experiential Learning Theory (1984)

Career Development

Connections with professionals and community members for learning and career opportunities

Greater academic learning, leadership skills, and personal efficacy can lead to greater opportunity

Relationship with the Institution

Stronger relationships with faculty

Improved graduation and retention rates

Strengthens the institutions relationship with the community

David Kolb's Experiential Learning Theory (1984)

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The STEM Collaborative Programs
Tech PREP and STEM Tech

Goals:

- Introduce STEM disciplines to participants through hands-on, project based meaningful learning;

- Increase students' interests, confidence and knowledge of STEM disciplines;

- Offer academic and motivational activities to underserved minority students from selected high-needs schools;

- Engenders a sense of community among the participants, mentors, and instructors.

TechPREP

- TechPREP was originally founded in 2008 by the Motorola Solutions Foundation Innovation Generation grant. It is a STEM Enrichment program for students in 5th-8th grade from underserved communities.

- TechPREP is a three year Project Base Program with mentors. It consist of progressing modules in Biology, Mathematics & Physics and Technology & Engineering. Reflection is embedded in the program. The students come to campus for special programs and a 1 week summer program. Undergraduate students along with graduate STEM students mentor the participants.

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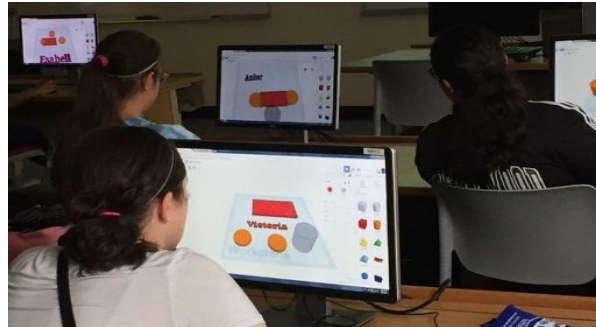
STEM Tech Clubs connect the classroom curriculum to real world learning and demonstrate
that students can have a positive impact on their communities in the world.

The Process:

- Students work in groups and learn identify the communities they belong to.

- Assessment of Community Needs--- Group Discussions and Photo Mapping

- Identification of needs and or issues that they would like to improve.

- Students work together to research and explore possible solutions.

- The Engineering Design Model or Problem Solving Model is used to design a solution.

- Students decide as a group which solution they would like to implement.

- Reflection and evaluation of the process as well as the tasks is built into the curriculum

- Community Partnerships: Schools, Brookhaven National Lab., Community Centers, Girl Scouts, Girls Inc. of Long Island and HCARE

- Student learn about careers in STEM first hand from industry mentors, college mentors and/or SBU graduate students or faculty.

- Students learn to be conscientious citizens as they are encouraged to think critically, ask questions and solve problems!!!

The Engineering Design Model

Process:

Identify a problem

Engage in exploration and

research

Plan and create a solution

Reflect on the task and the process

Evaluate what to do next.

Goal:

To connect STEM Curriculum

to real world learning in a meaningful,

purposeful way.

STEM Tech Clubs Projects

Focus on Environmental Concerns

Organic Farms- buy local….clean food

Pollution/ Erosion

Beautify a local playground

"Greening of your school"

Build a compost maker

Soup Kitchen

Building a memorial Fountain

Getting the School to add recycle bins

Designing solar lights

Visit the Marine Rescue Center

Clean the beach, build the beach

Love your environment

…be proud of it.

Mosquitoes Be Gone

"Hundreds of failed recipes—and bites—later, I found the winner. Mosquitoes Be Gone is the first repellent to neutralize nitrogen-based compounds in sweat. And it's all-natural." Founder Ms. Ruchi Shah

Mosquitoes Be Gone is a start-up social entrepreneurship company whose goal is to develop, market, and sell an all-natural mosquito repellent that will reduce the prevalence of mosquito transmitted diseases worldwide. Proceeds from the project are to be used to purchase and donate repellents to under-developed countries.

The company's founder has been recognized by the Young Inventors Hall of Fame, WolfieLaunch, the Long Island Business Plan and by Forbes.

Students from the School of Business, the Women in Science and Engineering Honors Program, Technology & Society and Computer Science collaborate on the project

Keep the Bugs at Bay, Nature's Way

Mosquitoes Be Gone

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The Humanology Project

The Humanology Project (THP), founded by WISE student Neha Kinariwalla is dedicated to the reduction of stigma surrounding mental and neurological illness.

History: Started in 2013, there were two contributors along with the founder who wrote articles on depression, autism and epilepsy. By the end of 2014, over thirty articles covering twelve illness had been published, with seventeen contributors receiving college credit through SBU.

By 2015 The Humanology Project had a substantial following and has contributors from thirteen countries and counting.

In 2016-17 the project revamped its website, and now partners with collaborators around the world including Hong Kong, Australia and the United Kingdom.

www.humanologyproject.org

http://www.humanologyproject.org/pathos-videos/

The Humanology Project

Student Involvement:

Blogs are written by a team of interdisciplinary writers. The addition of the Share Your Story" component lent itself to additional student involvement. Students interview volunteers and share their stories on the website.

Student roles include: Student illness specialist, Student Ambassadors, webmaster, Marketing and Student Translators.

Faculty Involvement:

 Sociology, WISE, Writing Departments and the Department of Technology and Society at SBU. Faculty served to edit materials, present relevant topics and assist with writing the curriculum.

www.humanologyproject.org
http://www.humanologyproject.org/pathos-videos/

Topics: "Could Technology Be Making Your Children More Depressed?"

"Traumatic Experiences and Their Relationship to Eating Disorders"

" What Color Is the Letter 'E'"

" Befriending Schizophrenia"

"The 'Blessing' of Bipolar?"

"When Your Furball Gets Too Sad"

Share Your Story

Reflection and Evaluation are important components of all experiential programs. Students keep blogs, or journals in which they document their experience and insight.

They answer questions such as:

What did I learn today?
How do I feel about what I did?
How will I apply my new knowledge
What can I do next?
How did my team work today?

Google images;Allston

Stony Brook University

Experiential Learning Programs can be implemented at all grade levels and with diverse populations.

Experiential learning focussed on the process as well as task completion.

Students report that their interest in learning is **ignited** by Service Learning!

Students express feeling engaged in the community and more connected to their institution, faculty and peers.