Ad Prima Charter School

We prepare students for high school, college and the world!

Project Based, Collaborative Learning

LiveS.T.R.E.A.M.

- Science
- Technology
- Robotics
- Engineering
- Artistry
- Mathematics

Ad Prima Charter School
1922 N. 63rd St.
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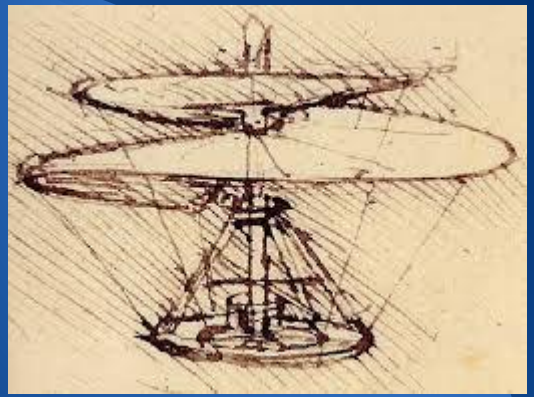
The Leaky Tech Pipeline

The Vision



- Enhance African American & Latino student motivation to persist on trajectory toward college
- Develop the problem solving, critical thinking, & creative/decision making abilities required for Leadership
- Expose, Engage, & Immerse Latino & African American children in the engineering design process
- Produce STEM Professionals who routinely combine artistry/storytelling with logical/analytical thinking in order to make dynamic new concepts/goods

Long Range Objectives

- Offer meaningful teaching thru project based, collaborative learning
- Model core values & demonstrate impact that active learning has for our students
- Adapt STEM activities to the school environment & a student centered approach
- Train students for leadership roles & college prep atmosphere
- Career exploration: STEM, art/graphics design, sports marketing

STATEMENT OF PURPOSE

We are passionately engaging children in STEM college prep & career exposure.

To Integrate technology into the school's curriculum to facilitate the initiation of seed programs that will ultimately culminate into:

- a STEM education pipeline featuring project based, blended learning
- Students displaying Teamwork, Creative Problem Solving, & Entrepreneurship
- Helping future engineers begin designing needed products that are both functional & aesthetically pleasing

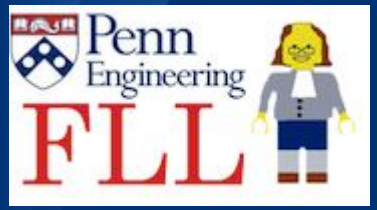
MESA Mathematics Engineering Science Achievement

MESA Day Prosthetic Arm Competition

Activies Offered

College of Engineering TEMPLE UNIVERSITY®

- year round, features Teacher developed curriculum
- 12-14 year olds, 7th-8th grade - expanding to 5th/6th for 2016-'17
- 1.5hrs/ 3x week after school
- Engineering/Computer Programming/ Video Game Design
- regional/national competitions
- Saturday Academy at Temple U. College of Engineering
- Build & Digitize a Prosthetic Arm
- Create an Academic Poster displaying Research
- Technical Paper documenting Research, use of Engineering Process



Activities Offered 2

First Lego League (FLL)

- year round, features STEM Robotics 101 curriculum
- 9-14 year olds, 4th - 8th Grade
- 1.5hrs/ 3x week
- Engineering/Environmental/Computer App
- Robotics/ Program Design/Core Values*
- local/regional/national competitions
- Teamwork/Programming/Problem Solving
- Video/gratitude/Tshirt,hats/Student produced Website

Activities Offered 3

JR First Lego League

- year round, features STEM Robotics 101 curriculum
- 6- 9 year olds, K - 3rd
- 1.5hrs/ 3x
- Engineering/Environmental/Computer App
- Robotics/ Program Design/Core Values*
- local competition
- teamwork/programming/problem solving/creativity/core values
- Building a display & creating a Show Me Poster

Activies Offered 4

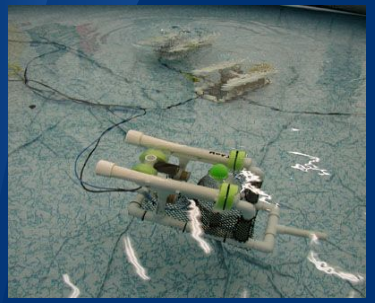
A.L.I.C.E. 3.0

- 12 weeks
- 8-14 year olds, 3rd - 8th grade
- 1.5 hrs/3x
- Computer App/Game Design/Animation
- Create 3D stories, movies,& games
- Learn basic JAVA

Activies Offered 5

MIT App Inventor

- 10 -12weeks, 3rd - 8th grade
- 8-14 year olds
- 1.5 hrs/3x week
- Computer App/Program Design/Building Apps & Video Games
- mobile apps for sale on google play store



Activies Offered 6

Drexel UNIVERSITY COLLEGE OF ENGINEERING

SeaPerch

- 10 weeks
- 9-14 year olds
- 1.5 hrs/ 2x
- Eng/Env/Computer App
- Robotics/Program Design
- regional

Greater Philadelphia seaperch TEACH • BUILD • BECOME

EDUCATIONAL PURPOSES

Our program is being designed to meet the criteria below (as taken from the Bayer Corporation's Planting the Seeds for a Diverse U.S. STEM Pipeline: A Compendium of Best Practice K-12 STEM Education Programs):

1. Challenging Content/Curriculum

• An inquiry-based, experiential curriculum that is clearly defined & understood

- related to real-world applications
- encourages critical thinking, problem solving & team working
- goes beyond minimum competencies
- reflects local, state &/or national standards

2. An Inquiry Learning Environment

• where teachers & their students COLLABORATE as active learners

- students' diversity, individuality & uniqueness are recognized & respected

Managerial (Administrative) Purposes

2. Sustaining An Inquiry Learning Environment
- teachers have access to & time allotted for professional development that hones their science knowledge & experiential teaching approach
- necessary curriculum materials are supplied in full

3. Defined Outcomes/Assessment
• Goals are clearly identified and success is measured against them
- assessment tools are designed to measure outcomes
- assessment provides:
*both quantitative and qualitative information
*basis for research and continuous improvement of program

COMMUNICATION PURPOSES

4. Sustained Commitment/Community Support
- Program has strong leadership and sufficient resources
- school and/or school district support
- community support, including parents and private industry

5. Continuity of Program Funding
- Focusing on the Following Best Practices
- Improving student outcomes
- Drawing potential funders
- Garnering support from stakeholders

Donors

Temple U. College of Engineering/MESA: To 7th/8th grade team
- Sparkplug kits, Labspace, resources to build & digitize prosthetic arms

UPENN FLL Grants: To 4th grade robotics team & K-3rd Jr. FLL team
- Lego EV3 robots, tournament fees, field kit etc

Home Depot
- Supplies to build robotics table, white boards, etc

Gold Metal Environmental: To 6th grade team
- Lego EV3 robot for 6th grade team

School District of Philadelphia*, ShopRite**
- Healthy snacks, meals for students

Donors Choose
- Lego EV3 robot, manual, & simple machine kits

PledgeCents
- $241 to purchase supplies

*past & **potential donors respectively

The Team

- Shelby Berger - MESA Lead Teacher 7th/8th grade
- Caitlin Bruni - Jr. FLL Co Lead for 3rd grade
- Ed Carter - FLL Co Lead for 6th grade
- Jason Lee - FLL Co Lead for 4th grade
- Sarah Preston - Jr. FLL Lead for 3rd grade
- Megan Simmons - FLL Lead Teacher 6th grade
- Carl Snell - STEM Club Director

Program References

- https://drive.google.com/drive/folders/0B1YEAV6F6jtfQXU3X0tvQmJINTA
- https://engineering.temple.edu/stem-education/stem-education-programs
- http://www.firstlegoleague.org/
- https://alliance.seas.upenn.edu/~pennfll/wiki/index.php?n=PennFLL.FIRSTLEGOLeague
- http://stemrobotics.cs.pdx.edu/node/2643
- http://www.firstinspires.org/robotics/flljr
- http://ilearningcontent.oracle.com/content/public/oracle_acad/SelfStudy/Articulate/Alice/interaction.html
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- http://www.phillyseaperch.org/