Involving Your Community

Invention Education Webinar Series

Thursday, March 8, 2018
6:30 – 7:00 p.m. ET
Lemelson-MIT Program Overview

- 15 years of experience
- 228 high school teams
- 7 U.S. patents
Presenter Chelle Myrann

- Physics, Robotics, and Engineering Teacher at Cesar Chavez High School, Phoenix, AZ
- Over 20 years of teaching experience

Invention Education Experience

- Lemelson-MIT InvenTeam (2010)
  - Physical therapy chair to reduce muscular atrophy
  - Presented at the inaugural White House Science Fair
  - Awarded U.S. patent 8,845,560 on Sep. 30, 2014
Community and Invention Cycle

Technical inventions are

• Useful
• Unique
• Reduced to practice

**Involving Community:**

• Inform the community of your work
• Ensure high relevance to the community
• Accelerate invention
• Motivate students’ passion and enthusiasm
• Convince people something good might happen if they contribute
Finding and Finalizing Problems

• Start with the most active/relevant groups to find out the need
  – Physical Therapy Chair Invention project
    ✓ teachers in the special education department
    ✓ physical therapist
    ✓ people who suffer or whose family members suffer
  – Other invention projects
    ✓ co-workers
    ✓ firefighters

Garden beds project: working with a community member to design, fabricate, and install raised garden beds
Inquiry, Research, and Design

• Meet other inventors and entrepreneurs at NCIIA (National Collegiate Inventors and Innovators Alliance) conference
  ✔ College students
  ✔ Professors and entrepreneurs
Inquiry, Research, and Design

• Seek feedback on evaluating preliminary invention solutions
  ✓ Physical therapist and special education teachers
  ✓ Potential client or beneficiary
  ✓ The feedback evokes iterative design process, and may require longer time than expected.
Building and Testing

- Support from local industry partners: Ace Auto assisted with welding aluminum

- Patent lawyers

Students learned fabrication skills

Diego discussed patent with lawyer Ben Erlick
Family and Friends Help Fundraise and Celebrate Success

• Help solve problems during invention: Making tamales to raise travel funds

• Celebrate the success with families
Keep the Community Updated

• Community Invention Festival to celebrate with community members and support young inventors

• Continuous effort to involve the community, e.g., overcoming language and cultural barriers

• Mixed channels to keep the community informed
  o formal meetings
  o informal gatherings
  o social media
  o newsletters
  o community showcases
  o tax deducting donations
Not all Community Engagement is Successful

- Community engagement may not be always successful
  - Chelle’s InvenTeam experience with Group Homes for Abused Children

- Understand and explore different “communities”
  - constantly build your network (local business, firefighters, policemen, senior citizens, government, etc.)

Be proactive in reaching out to the community!
Haiti Container Building Project involves local communities, students, and parents through:

• $2 per day campaign
• School-wide clothing drive
• Fundraising dance party

Make it Easy and Fun for the Community
Lemelson-MIT Resources

Lemelson-MIT Program
http://lemelson.mit.edu/

InvenTeams National Grants Initiative
http://lemelson.mit.edu/inventeams

JV InvenTeams Curriculum Materials
http://lemelson.mit.edu/jv-inventeams

Inventor Archive
http://lemelson.mit.edu/search-inventors

Inventor’s Handbook
http://lemelson.mit.edu/search-resources/45
THANK YOU!

Contact Us at PD-lemelson@mit.edu

Invention Education
Webinar Series