

National Science Foundation STEM Forum 2015



Advanced Reasoning in Education
Global Project Based Learning Academy

Steven Zipkes
Founder: President



Former Founding Principal

Fixed Mind Set

Rigid Schedule

Built around Buses, Athletics, Band,
Seat Time, Carnegie Units

Silos/Departments

Top Down Leadership

Controlled Curriculum

Content Specific

Traditional Pedagogy

Higher Ed

AP/IB

Growth Mind Set

Creative Schedule

Built for Academic Achievement/Trimester

Integration of Contents

Team Teaching/Integrated Standards

Distributive Leadership

Agency

Effective Curriculum

Teacher Autonomy Using Data

College/Career Readiness

Essential 21st Century Skills

Engaging Pedagogy

Project Based Learning

High Ed/Industry

Partnerships for Certifications, Innovative College Credit
Dual Credit



Whole School

**T-STEM:
Science
Technology
Engineering
Mathematics**

Expectations

**Trimester Schedule
6 yrs. Math
7 yrs. Science
7.5 yrs. Engineering
Digital Portfolio
Capstone Internship
50 Hours Community Service**

New Tech

**Project Based Learning
"1:1"
Seamless Integration of
Technology
Integrated Courses**

Student Learning Outcomes



Professional Skills Learning

Student Learning Outcomes

Written Communication: The ability to effectively communicate knowledge and thinking through writing by organizing and structuring ideas and using discipline appropriate language and conventions

Oral Communication: The ability to communicate knowledge and thinking through effective oral presentation

Collaboration: The ability to be a productive member of diverse teams through strong interpersonal communication, a commitment to shared success, leadership, and initiative.

Knowledge & Thinking: The ability to reason, problem-solve, develop sound arguments or decisions, and create new ideas by using appropriate sources and applying the knowledge and skills of a discipline.

Agency: Develop Growth Mindset: I can grow my intelligence and skill through effort, practice and challenge.
Take Ownership Over One's Learning: I can learn how to learn and monitor progress to be successful on tasks, school, and life.



Validity with a National Impact



WHAT STUDENTS HAVE CHANGED THE WORLD
THE UNIVERSITY OF TEXAS AT AUSTIN



NATIONAL ACADEMY OF SCIENCES

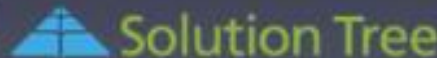
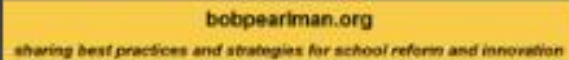
U Teach

We Prepare Teachers. They Change the World.



Charles A. Dana Center
The University of Texas at Austin

Improving education
for all students



Illinois Consortium for 21st Century Schools
MindQuest21...



The Achievement Gap Initiative at Harvard University
Toward Excellence with Equity





Advanced Reasoning in Education

Global Project Based Learning Academy

<http://advancedreasoningined.com/>

STEM shouldn't just be about more Science, Technology, Engineering, and Math continuously taught in isolated programs or specialized classes.

Its about :

- **S**ocial justice
- **T**eacher quality
- **E**ngaging curriculum
- **M**aking a difference

*Where **Innovation** Is A Prerequisite*