Jack Abrams STEM Magnet School

Community Information Session

Huntington Union Free School District
"A Tradition of Excellence"

Agenda

- Welcome and introductions
  - Mr. Jim Polansky, Superintendent of Schools
- Brief Overview of STEM
  - Ms. Rae Montesano, Chair 7-12 Science & Technology
  - Dr. Kenneth Card, Assistant Superintendent for Curriculum and Instruction
- Teq Equipment (Corporate Partner) Presentation
  - Ms. Geri Resta, Mr. Scott Sheridan

What is a STEM School?

- S.T.E.M. is an acronym for **Science, Technology, Engineering and Mathematics.**
- The Jack Abrams STEM Magnet School will focus on these subjects and more to help our students gain the 21st century skills required to succeed in today's global and technologically-driven society.
- Important attributes:
  - Critical thinking
  - Complex problem-solving
  - Effective communication in a digital world
  - Collaboration
  - "Tinkering"

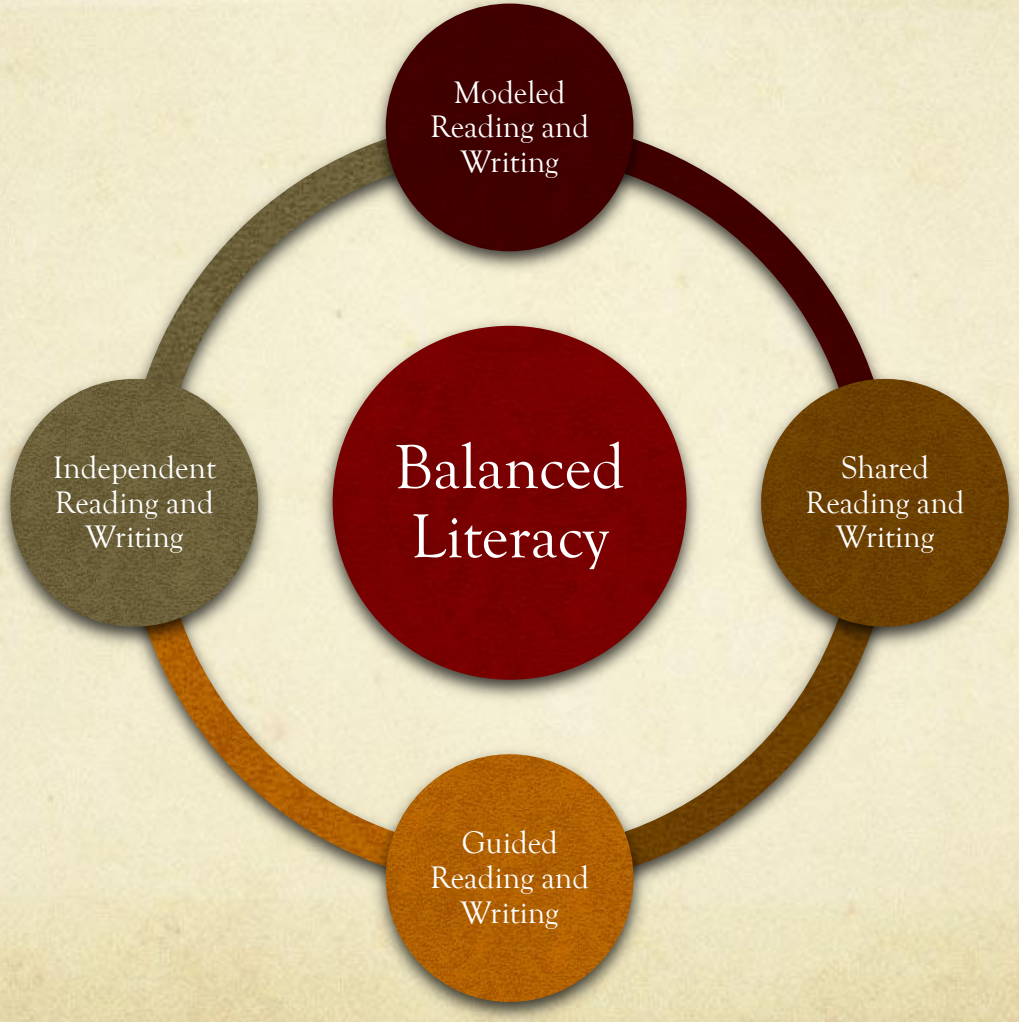
STEM Approach = Integration

- Students will learn to see all knowledge as connected, rather than artificially separated into discrete disciplines.
- Authentic project-based learning will enable students to see:
  - Connections between subjects
  - Connections between what they are learning and the world around them

STEM and Literacy

- While STEM will remain a focus, strong reading, writing and comprehension skills are often the gateway to success in other subjects
- A significant portion of the school day will contribute to building student literacy skills using a balanced literacy approach …

Balanced Literacy



Literacy Curriculum

- The school will utilize the Board-adopted Macmillan McGraw Hill "Treasures" reading series to …
  - Develop students' phonemic awareness
  - Increase student vocabulary and reading fluency
  - Provide instruction for ELL students
  - Differentiate instruction
  - Develop students' comprehension skills
  - Provide multicultural/cross-curricular literature
  - Integrate technology

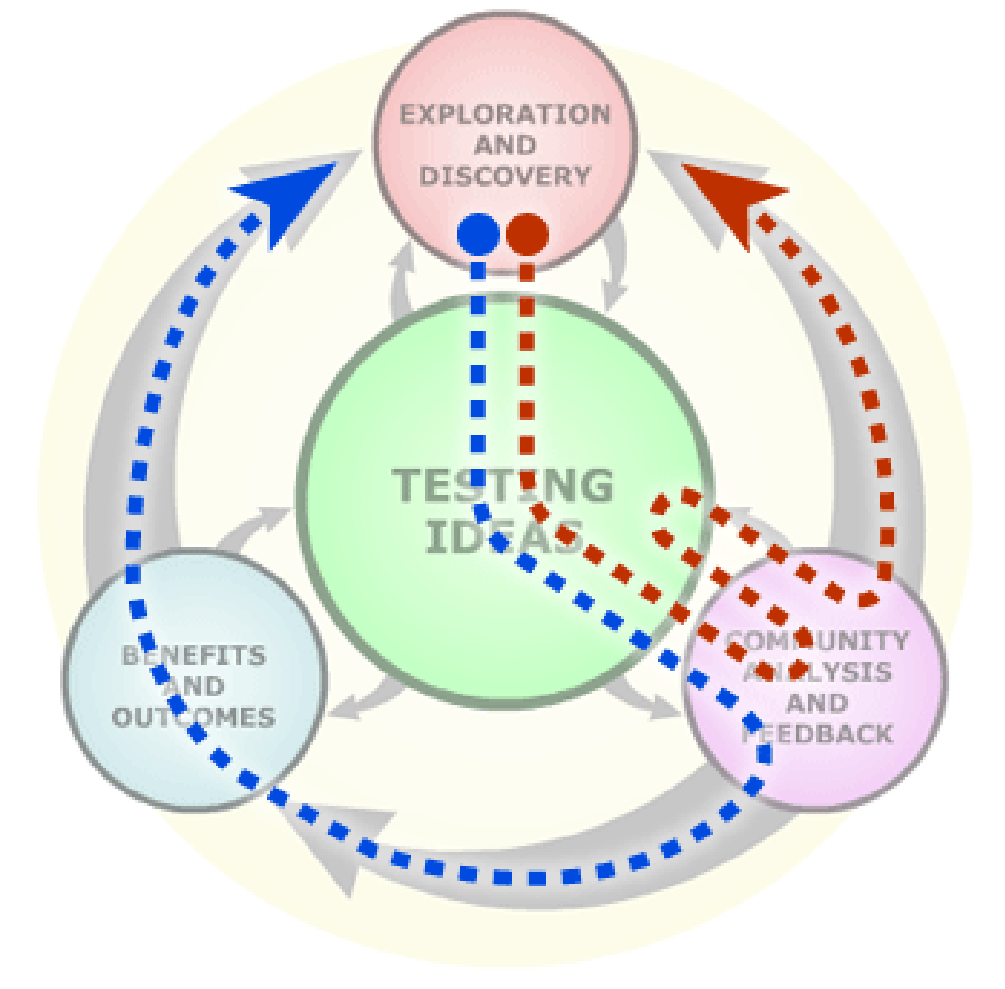
STEM Curriculum

- Science
  - Next Generation Science Standards
  - KnowAtom inquiry-based
  - Supplemental programs including outdoor education
- Technology
  - Embedded in the core curriculum
- Engineering
  - KnowAtom
  - Supplemental programs
- Mathematics
  - Common Core Learning Standards

Science Experience

- Schedule:
  - 3 to 5 blocks each week
- Classroom Experience:
  - Inquiry-based, problem solving approach
  - Students are scientists = “doing” science
  - Ongoing questioning, observing, collecting and analyzing data, generating explanations
- Topics in life/physical/earth science

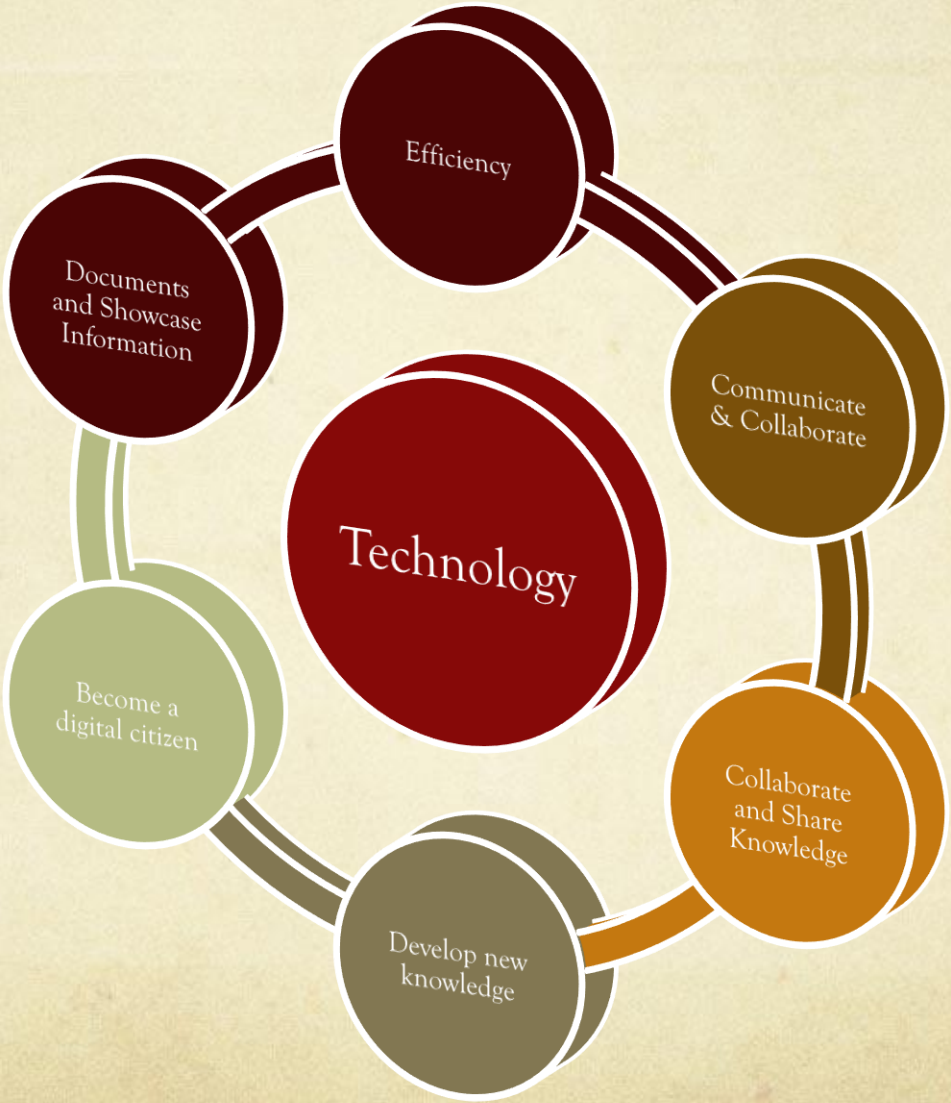
Scientific Inquiry – The Process of Science



Technological Experience

- Schedule:
  - Technology embedded in daily lessons
  - Range of technologies explored
- Technology includes:
  - Hardware – computers, digital cameras, SmartBoards, tablets, etc.
  - Software – wikis, Google tools, models & simulations, logic software that supports computer programming

Technological Philosophy

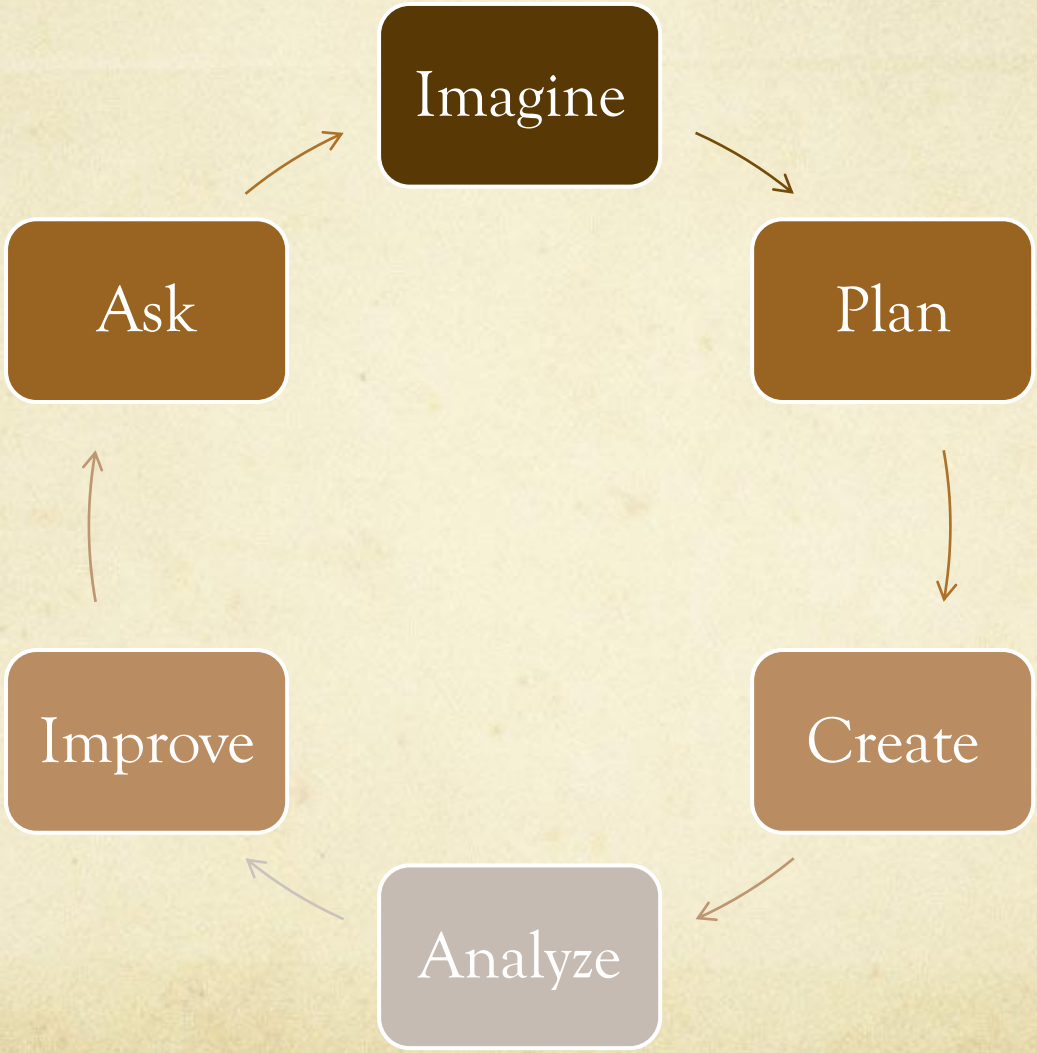


Engineering Experience

- Classroom Experience:
  - Strong focus on “how” and “process”
  - Formulation of solutions to issues or problems in an hands-on manner
  - Applying math, science and technology concepts in a real world setting (e.g., building, designing, data collection, information analysis, troubleshooting)

- Exploratory examples …
  - Windmills
  - Bridge design
  - Hand Pollinators
  - Robotics
  - Shoreline maintenance
  - Community projects

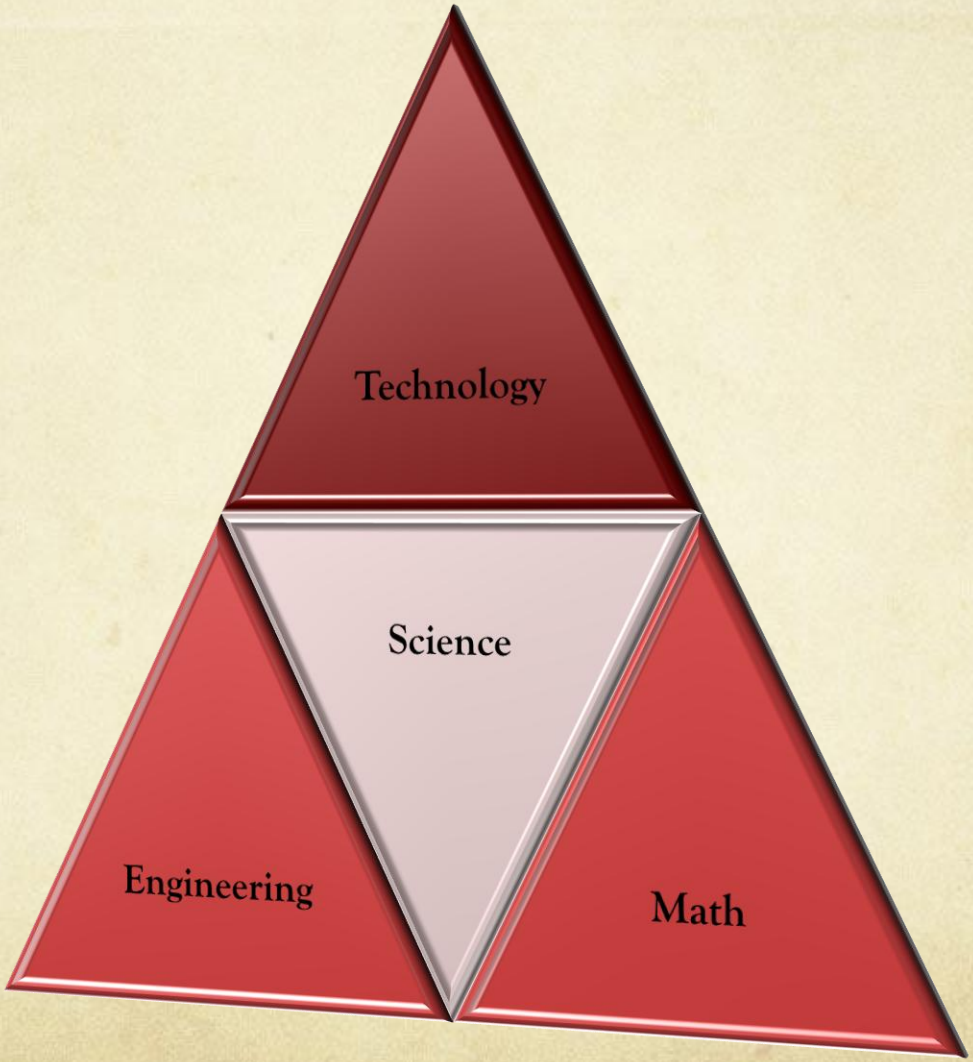
The Engineering Design Process



Mathematics Experience

- Schedule:
  - Math block daily
- Classroom Experience:
  - Strong focus on using and applying mathematical ideas in meaningful ways
  - Focus on students' deep understanding
  - Connections to science, technology and language arts embedded within unit study

INTEGRATION IS KEY!



SAMPLE SCHEDULE

Sample STEM School Schedule

Grade 4	Monday	Tuesday	Wednesday	Thursday	Friday
9:10-9:20	Arrival/Homeroom				
9:20-10:00	Math	Math	Math	Math	Math
10:01-10:41		Social Studies		Social Studies	
10:41-11:21	Literacy/ELA	Literacy/ELA	Literacy/ELA	Literacy/ELA	Literacy/ELA
11:22-12:02					
12:03-12:43	PE	Music	PE	Art	PE
12:44-1:24	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1:25-2:05	Science	Engineering	Science	Engineering	Science
2:06-2:46					
2:47-3:17	Extra Help				
3:18-3:30	Dismissal				

Application/Selection Process

- Applications are available at this meeting and will also be mailed to parents/guardians of students in grades 3, 4 and 5
- Return deadline – May 15, 2013
- Selection will be done via lottery associated with each of four district attendance zones
- IMPORTANT NOTE: September 2013 school opening is contingent upon grant funding
- Notice of school opening and selection would occur in late June or early July. Parents/guardians of selected students will be required to confirm student attendance