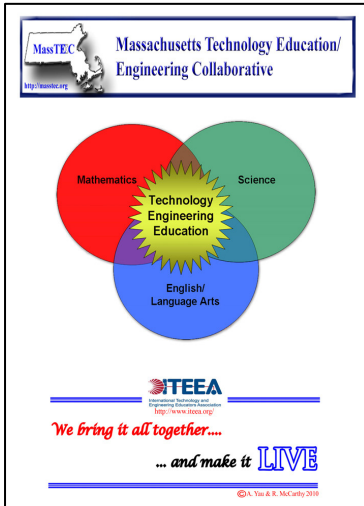




Massachusetts Technology Education/ Engineering Collaborative

April 2010
Volume 1 Issue 2



The *MassTEC Express*

Welcome

In this edition of *MassTEC Express*:

- President's Note
- Hot Topics
- The 72nd Annual ITEEA Conference <http://www.iteea.org/>
- Recent MassTEC Activities
- Cool Websites <http://masstec.org/>
- Free Lesson Plan
- NEAP 2012

Download a free copy of this new, updated poster:

<http://masstec.org/conferencefolder/conference2009/conference2009.htm#posterli>

From the President's desk:

Greetings!

We are the T&E of STEM! Spread the Word!

Here's just a few of the items and articles in this issue: articles from Senator Brewer and Dr. Antonucci; Dr. Sally Ride and the Gender Equity Round Table; Our Website has a new look <http://www.masstec.org/>; a call For MassTEC Fall Conference presenters; ITEEA name change; Random Thoughts from an ITEEA Rookie; and More!

With all the attention on the STEM Pipeline concerns, we are the discipline that unifies all the students' learning in a holistic, authentic real world way. We all need to spread the word! Remember, **"Never doubt that a small group of thoughtful committed citizens can change the world; indeed, it's the only thing that ever has"** ~ Margaret Mead.

Also, the annual ITEEA Conference was in Charlotte, North Carolina March 18 - 20. The Charlotte Convention Center was hopping with our colleagues, technology engineering experts, and vendors with the latest teaching & learning tools and materials and over 100 professional development learning sessions. There were educational tours, workshops, and great networking opportunities. These offerings had real "take home value" that you could implement directly into your classroom! You should join the ITEEA and plan a grand trip to Minnesota next March. More to follow in upcoming newsletters.

How important is Technology Engineering Education to America's school children? Here's a response from Maia, a young woman in my sixth grade class:

a) What did I learn about myself while working and learning in Tech Ed this term?

"I learned a lot about myself in Tech Ed this term. I learned that I can actually draw a blueprint that shows the measurements of my car. Also, I built a fast, pretty car, and I used science, math, and technology to solve my problems. I didn't know I could do that. Because I worked in Tech Ed, now I know I can."

b) What did I learn about Tech Ed this term?

"I learned many things about Tech Ed that I didn't know before. I learned that when you try to build something or accomplish something, all you have to do is try your hardest, and there's no way you can't succeed. Also, I learned how Tech really connects to everything that you learn. You can see it in math, science, technology, art, and even language arts and social studies, in everything, really. There is so much to learn."

Used with permission

Dr. Ray McCarthy
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MassTEC President
Technology Engineering Education Teacher
Monument Valley Regional Middle School
Great Barrington, MA 01230



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w: 413.644.2300 x2

Hot Topics

Technology Engineering Education Is Critical

Boston, MA --

Technological Literacy is not just the ability to use a computer, but also the understanding of “the big picture” of the role technology plays in our lives.

Learning and adapting to new and emerging technology tools is what will keep our next generation competitive and viable not only in Massachusetts, but in the global economy. Students that are not only proficient with word processors, spreadsheets, databases, electronic research, e-mail and graphics, but also knowledgeable about of the important role of technology in research, critical thinking, problem solving, decision making, communications and creativity will ensure a strong national economy in the coming years. Technology Engineering Education is critical to the future of Massachusetts.

On a personal note, I recently learned how effective social networking sites like Facebook can be for individuals and companies to maintain contact with friends and clients. These types of advances allow businesses to reach new markets and educate potential customers on services and/or products. We must focus our efforts on providing students with the ability to manipulate current technologies so that they may create new possibilities.

~ Senator Stephen M. Brewer

Technology Engineering Education: A Key Part of A Well Rounded, Comprehensive Education

Fitchburg, MA --

Schools today play an important role in preparing students to have a broad based education to prepare them to be productive citizens. The skills and competencies students acquire are lifelong and are important to their future success. One important aspect of this development is technological literacy. This body of knowledge based on scholarly research is becoming more crucial these days as schools' curriculum comes under scrutiny. Our schools today must include in their broad based curriculum Technology Engineering Education. This body of knowledge is all encompassing and meets the needs for technological literacy. It is also consistent with standards and frameworks developed in many states including Massachusetts.

Fitchburg State College, a liberal arts college with over twenty five different majors, continues to prepare teachers for work in our schools. One of the leading majors at the college is Industrial Technology. The basic thread for this program is preparing students to be teachers for Technology Engineering

Education in our schools. In fact Fitchburg State is a leader in this area. Our curriculum is strong, we have excellent resources for students and staff and we have one of the few licensure programs in the region. When districts need teachers in this area Fitchburg State is their first stop. Our placement record and demonstrated success is second to none. We truly are number one.

In this age of education reform often times Technology Engineering Education is placed on the back burner. When this happens it is tragic and students are denied the opportunity to receive a well rounded, comprehensive education. At Fitchburg we have a strong belief in this content area. Our actions speak for themselves. Let's hope this is contagious and that your school districts also become leaders in providing students with options and choices to enhance education.

~ Dr. Robert Antonucci, President, Fitchburg State College

The 72nd annual International Technology Engineering Education Association Conference

Charlotte, NC --

Over 1,800 teachers, professors, and industry leaders met to learn how we need to help prepare the world's children for an ever



increasingly technological world. This will require our students to know more than the 3 R's to compete in today's "global knowledge economy" (former Secretary of Education Spellman, NPR, March 17, 2010). As famed Chemist, Dr. John Warner, said in the keynote address, “our children need to be encouraged to learn about creativity, teamwork, and knowing what tools and techniques that could be used to solve the problems we face... “

Over 100 workshops covered everything from green tech, to robotics, to “gaming our future”, to adding more diversity in the STEM fields as well as educational tours, workshops, and great networking opportunities.

The attendees of Dr. Ray McCarthy's workshop, *Beyond Smash & Crash, Part 2*, worked in small groups to create game plans to improve gender equity in high school Technology Engineering Education classes across the nation. Experiences in getting more girls and young women interested in Technology Education and Engineering in Somers, CT and MVRMS were compared while focusing on how to create learning experiences that challenge both girls and boys to do their best. For more go to:

<http://www.authorstream.com/Presentation/DrRayMcCarthy-354615-itea-beyond-smash-crash-part-2-education-ppt-powerpoint/>

~ RMc.

Governor Patrick's STEM Council

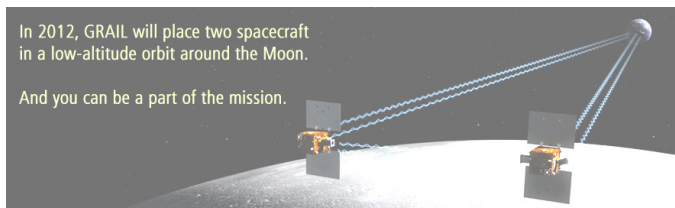
Boston, MA --

Two MasSTEC Board members have appointed to Governor Patrick's STEM Council. Board members Dr. Ray McCarthy (president) and Charlie Corley are members of two of the six sub-committees established by the governor's office. Ray is a member of the **Diversity Subcommittee: Improving the Achievement Gap and Pursuing Additional STEM Opportunities for Women and Minorities** and Charlie is a member of the **Curriculum Framework and Standards Subcommittee: Alignment and Upgrades**.

As the press release from the Lt. Governor's Office states: "The Council will serve as the central coordinating entity to bring together all of the participants and parties from state agencies, the legislature, and members of the public and private sector involved with STEM planning and programming. Recognizing that STEM is crucial to our students' abilities to remain globally competitive as well as the Commonwealth's economic well-being, this Council was established to ensure we are working collaboratively to improve STEM education and policy statewide. Together we will set measurable goals, and strive to take to scale programs that we believe will positively impact our students' understanding of and interest in STEM. This Council will set priorities, invite participation of interested constituencies, and ensure that we are making measurable improvements to the college and career readiness of students across the state.

The Council will take a multi-faceted approach in the beginning months, that will include creating a statewide STEM Plan with clearly defined goals and objectives for the next five years, assessing how best to bring to scale the most effective STEM programs in Massachusetts, facilitating the development of activities to fill unmet needs, and providing recommendations for a campaign to build public support across the Commonwealth for the STEM disciplines. Working with families, educators, legislators, and business and community leaders, the Council seeks to promote a greater understanding about the importance of these essential disciplines to students' academic achievement and successful preparation for entry into the 21st Century workforce."

~ Charlie Corley, DTE



In 2012, GRAIL will place two spacecraft in a low-altitude orbit around the Moon.

And you can be a part of the mission.

~ <http://www.grailmoonkam.com/>

"Merchandising!" ~ Mel Books as Yogurt in *Spaceballs -- the Movie*
We need to sell what we do!

[We Definitely Will] Also Include Technology [Education And] Engineering.

"I can recall lots of frustration being aired in and around our profession when there was no mention of technological literacy or study of technology and engineering in "No Child Left Behind."

My expectation as a member of this organization [ITEEA] and this profession is that our national and state leaders should be savvy enough to engage with policy makers about issues surrounding study of T&E. You might not feel the same considering the amount of energy you already put into professional development, conferences, working with vendors, curriculum planning, awards, and other things. But, having done all that and some public policy actions too, it remains my expectation.

This is what it says in the "blueprint for reform" released by Secretary Duncan: "Our proposal will provide competitive grants to support the transition to higher standards by assisting states in strengthening their STEM programs and by providing substantial support to high-need districts in implementing high-quality instruction in at least mathematics or science and **may also** include technology or engineering." It's up to us to make sure that the maybe language becomes "*we definitely will.*"

~ Email from David Janosz dave@janosz.us

Contact your United States Senators and Representatives today! ~ RMc.

ITEEA
 New Moniker



Reston, VA --

The International Technology Education Association (ITEA) has officially become the **International Technology and Engineering Educators Association (ITEEA)** as a result of a February balloting of the association's voting membership.

This change causes the association to immediately address curriculum and professional development that includes both technology and engineering education at the K-12 level. The association's membership has been comprised of teachers who have been working in both areas and with many of its affiliates already having "engineering" in their association's title. The term engineering is not new to the technology teaching profession; it has been used for over a century in various course titles, discussions, and curriculum efforts. The engineering community played a key role in the creation of this subject area as it has gone through various name changes as industry and technology have changed.

The name change properly positions the association to deal with the 'T' & 'E' of a strong STEM education. The association has recently produced *The Overlooked STEM*

Imperatives (ITEEA/ITEA, 2009) a publication that brings attention to technology and engineering as missing components of a solid STEM education. ITEEA’s continuing initiatives with the Engineering byDesign™ curriculum work further adds to the promotion of technology and engineering at the K-12 school level.

~ **STEM Connection**-Vol. 1, #7, March 16, 2010. ITEEA Publication

This I Believe...*

Please consider writing a short (1 or 2 paragraph) article for the next MassTEC Express regarding your ideas on the need for Technology Engineering Education for our future citizens' technological literacy.

**NPR Series title*



Photo ~ Bill Van Loo
PhotoShop ~ R.Mc.

Knowledge Develops From Authentic Experiences

Tokyo, Japan – “In the book, *Education on the Edge of Possibility*, authors Renate Caine and Geoffrey Caine emphasized that a shift in societal organization is now underway and stated, “a new model of education is needed to support the individual to be prepared for this change (1997, p.12, 33). Caine and Caine posited that in a world of information, a program that ‘pours in’ content is no longer functional for learners; a new form of interconnected organization, which recognizes that *knowledge is dynamic, verifiable and revealed through authentic experiences, is offered as a solution* (p. 258).”

~ **James Foss**, Northeastern University Online Doctoral student, Used with permission.

3. Spread the word that although the ITEEA has over 3,200 members, the IdeaGarden only has approximately 280 participants.

4. ***Recruit all Technology Engineering Teachers to join ITEEA!!!*** Did you realize that there are approximately 30,000 +/- teachers who teach our discipline? So only about 10% belong! (States do not seem to have accurate counts...the Massachusetts DESE responded to a number request with “some 600 or so professionals have something to do with technology.”)

We need to have strength in numbers!
<http://www.iteea.org/Membership/membership.htm>

~ RMc



IdeaGarden & the ITEEA

Charlotte, NC --

The *IdeaGarden* is a web community that is one of the many

benefits of joining the ITEEA.

During the recent conference, 16 members of this virtual pen pal society met to share experiences, put faces to names, and learn more about what we educators do.

Several great suggestions came out of the meeting:

1. Start a new Gmail account just for IdeaGarden (I use ray.mccarthy.itea@gmail.com). It is free and the hundreds of great suggestions do not freeze my school email.
2. Post a picture on your Gmail account so we remember what you look like.

**Dr. Sally Ride
and
A Roundtable Discussion about
Gender Equity in Math and
Science Education**



Boston, MA --

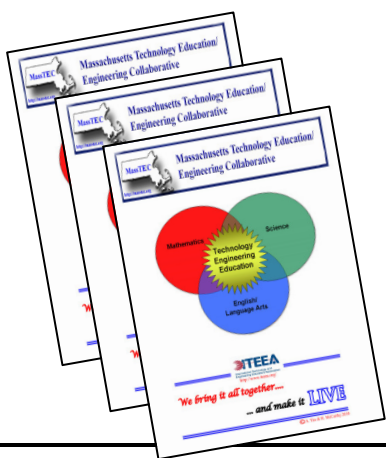
Leaders and members of the governor’s **STEM Advisory Council** had a kick off meeting at the Omni Parker House on March 9, 2010. Lt. Governor Tim Murray led the program by highlighting the recently created Diversity subcommittee (see below). Dr. Sally Ride spoke of her life, education, career, and hopes for our future. After her comments, she joined former Governor Jane Swift, former Miss Massachusetts and founder of the [WhizKids Foundation](#), Erika Ebbel, and lead scientist on NASA's [Grail MoonKam](#) mission, Dr. Maria Zuber, in a roundtable discussion on gender equity in math and science.

To sum up the discussion, panelists were asked what success in increasing gender equity looked like. Former Governor Swift replied “when the same number of boys and girls pursue degrees in science/math careers.” Erika Ebbel responded when “we’re building new universities and campus facilities to keep up with the demand of high school students pursuing college degrees.” Dr. Zuber said “when women in

science aren't considered trailblazers but it's a natural career choice." Dr. Ride wrapped up with "when the number of high school girls equals the number of high school boys going into science and Engineering careers." She further stated: "Any career that you want to be good at is hard work. You don't have to be a genius to be a scientist; it's like any career--you need passion to succeed." ~ Carole McFall of NOVA <http://www.pbs.org/wgbh/nova/insidenova/2010/03/dr-sally-rides-roundtable-discussion.html> Quoted By Ray McCarthy

This meeting was all about Science and Math, which leaves out the T&E -- Technology and Engineering. Museum of Science President, Dr. Ioannis Miaoulis, asked the first question in the Q&A section: "What about the engineering field that needs so many new engineers to not only maintain what we lose to retirement but to simply try to keep up with India and China? For every scientist, we need 20 engineers." That is when Dr. Ray McCarthy, President of MassTEC, stood up to support Dr. Misaoulis and said that "we need 20 technologists for every engineer. And while we are finally seeing that the STEM career pipeline is a national, indeed, a global imperative, one of the natural suppliers of STEM literate citizens -- Technology Engineering Education -- is not only not being supported but even eliminated in many school districts." The panelists agreed that these areas need more support as well while copies of the MassTEC Venn poster showing that Technology Engineering Education is LIVE Math, LIVE Science, LIVE ELA, and More were handed out.

~RMc



Diversity Subcommittee: Improving the Achievement Gap and Pursuing Additional STEM Opportunities for Women and Minorities

Boston, MA --

"The number of women and minority students prepared for and planning to enter STEM majors must be dramatically increased, not only as a matter of equity, but because we predict that we will not have enough workers to fill the jobs in STEM companies without them. Massachusetts is below the national average when it comes to the number of African American and Hispanic students per 1,000 high school juniors and seniors that pass AP math and science exams. At a time

when our economy is shifting to be more globally competitive and innovation based, these are troubling trends.

According to the University of Massachusetts, the state will witness a dramatic increase in the percentage of its workforce composed of minorities: 28% of the Massachusetts working-age population will be minority by the year 2020, up from 15% in 2000. This expanded minority presence in the workforce will be especially visible among young workers. By 2020, nearly half the 25-29 year-olds in the three southern New England states (CT, MA, RI) will be minorities. Therefore, our STEM initiative and report of the Council must have a component to address the achievement gap among minorities and women, so we can encourage more of those students to enter and succeed in STEM careers.

This subcommittee of the STEM Advisory Council is dedicated to making recommendations to make marked improvements.

This subcommittee will:

1. Identify best practices and programs that lead students to pursue STEM courses and graduate with a degree in a STEM field
2. Work with outside partners and advocates who seek to increase the number of women and minorities pursuing STEM
3. Meet with members of the Executive Office of Education to learn about the implementation of education reform, the report of the Dropout Commission, and other associated work in order to collaborate efforts and expertise to make improvements on the issue of the achievement gap"

~ Email from **Marissa Goldberg Cole**

The STEM Council Diversity Subcommittee meeting was held at **Wentworth Institute of Technology** on Tuesday, March 30, 2010. Details to follow.

Email the Co-Chairs:

Ruth Branson at: rbranson@girlscoutseasternmass.org

Dr. Zorica Pantic at: panticz@wit.edu

~ RMc.

Random Thoughts from an ITEA Rookie



Natick, Ma & Louisville, KY

When I walked into my first International Technology Education Association (ITEA) Conference in 2009 in that Bluegrass state, I was extremely unprepared for what I was to experience for the following five days. I had been sent there as a liaison to the National Education Association, as one of its Board of Directors, to observe and learn and to bring back information to the NEA leadership. I left with a new language, a new lens and a lot of questions.

From the start, as I tried to navigate the conferences extensive list of mini-classes and

seminars I found myself like the kid in the class who sits overwhelmed with the information and without ability to focus. In the end, I was able to navigate the week, with the help of many new teachers who were some part of STEM teaching, whatever that meant. In the end, I was able to return home, and then soon thereafter to NEA, with new insight on what education is missing in many places, a clearer focus and commitment to sciences, technology, engineering and math in a world where education school systems throughout the country are racing to renovate their academic programs to be more 21st century skilled.

For me, I don't think my initial journey into the ITEA world could have been timed any better. Coming back to Natick, Massachusetts, to the high school where I work in as an assistant principal, I found I had a lot of questions not the least of which were questions asking my own district, what more can we be doing in Science? What more can we be doing with technology? Where is engineering?? Fortunately, math had always been a focus due to the MCAS assessment. Even more timely for my new-found interest in STEM, was the fact that we were at the start of a new building project for a new high school and with it a seat at the design table for our new school related to programs.

Since that trip to Kentucky, I have begun to notice a lot about things related to STEM teaching right here in our own school. As the liaison to our own building project, I have witnessed a new investment in technology certification programs, science programs, robotics programs as new types of classrooms and structures are set in place for a real 21st Century School. It has been a long journey for me to understand the real need for more focus on STEM education, partly because the classes I taught way back were acting and public speaking courses and partly because I did not "see" the concerns of STEM teachers. I can tell you, now, I get it.

My work with NEA and its Board of Directors, as a liaison to ITEA, gives me an opportunity to provide a voice with the administration of NEA to remember that focus on STEM education needs to be clear, prominent and permanent in order to help root public education 21 Century skills and to prepare its students to be 21st Century citizens.

~ **Zach Galvin**, NEA Board Administrator-at-Large
Massachusetts

"The future belongs to those who believe in the beauty of their dreams." ~ Eleanor Roosevelt

Great Things Happen

Great things happen in the Technology Education Engineering classroom. MassTEC recognizes those individuals and groups who strive for excellence and provide their students with the best educational experiences.

We are doing this through two recognition programs: **Program of the Year, and Teacher of the Year.** The recipients of Teacher of the Year, and Program of the Year will receive a plaque and a \$150 gift certificate to the vendor of their choice. The top two finalists of Teacher of the Year will receive a free MassTEC membership, admission to the following year's MassTEC conference and a year's membership to ITEA. The top two finalists of Program of the Year will receive a free MassTEC membership, admission to the following year's MassTEC conference. The award recipient(s) will receive a one year membership to ITEA for up to 3 members of the department.

Go to <http://masstec.org/recognition/index.htm> for the applications and additional information.

~ **Charlie Corley**, DTE

Letter to the Commissioner

January 21, 2010

Mitchell D. Chester

State Commissioner of Elementary and
Secondary Education



Dear Commissioner Chester;

Thank you for your time and interest in helping MassTEC spread the word that Technology Engineering Education is one of the best ways to address technological literacy and STEM pipeline issues. Your insightful questions and background knowledge made me appreciate that we have very similar goals.

I came away from yesterday's meeting with these understandings:

- You will consider ways to support the efforts of MassTEC in supporting students' learning in hands-on courses taught by certified technology engineering education teachers.

- You will consider ways to be a "bully pulpit" for Technology Engineering Education since this is a Pre-K-12 core discipline that can help improve technological literacy, perhaps with a note in your monthly newsletters to superintendents.

- You will speak to the MassTEC Conference at 8:15 a.m. on October 15, 2010 at Fitchburg State College unless your schedule needs to change.

- You will consider adding two middle school technology engineering education teachers to the Science and Technology/Engineering frameworks committee.

- Your staff will look into the teacher pipeline issue, perhaps with Dr. Antonucci at Fitchburg State College, to

prepare for the coming technology engineering education teacher retirement/replacement gap.

➤ MassTEC will contribute to the STEM education discussion including running workshops to help enlighten educational leaders with your support. Barbara Libby will assist on this.

➤ I will collaborate with you and your office on the issue of recruitment and retention of women in STEM studies and careers.

➤ We, the MassTEC board and you, will meet again in the future to work together on these issues.

Furthermore, I invite you to future MassTEC board meetings to discuss how we might better connect with you in supporting the nationwide STEM initiative outlined by President Obama and the commonwealth’s initiatives led by Governor Patrick and Lt. Governor Murray.

I look forward to our future cooperation and communications.

Thank you.

Dr. Ray McCarthy

Email Commissioner Chester at: MChester@doe.mass.edu

And

Dr. Sherri Killins, Commissioner of Early Education and Care for the Commonwealth of Massachusetts at:

Commissioners.Office@massmail.state.ma.us

~ RMc.

Standards for Technological and Engineering Literacy

On March 6, 2010 the National Assessment Governing Board voted unanimously to approve the **2012 NAEP Technological Literacy Framework**. The framework document approved by the Governing Board is available for public download. In addition to approving the framework, the Governing Board also voted to change the title of the assessment and the year in which it will first be administered. The new title for the assessment is the “NAEP Technology and Engineering Literacy Assessment” to be first administered in 2014. Updated versions of the framework and specifications documents incorporating the new assessment title and year will be available for download in the upcoming weeks.

~ Charley Corley, DTE

Engineering Education (E2) for Innovation Act

Washington, DC --

On February 25, 2010, the Engineering Education (E2) for Innovation Act was introduced in Congress. The floor speech by a very passionate Senator Kaufman can be viewed at this link starting at 112.40 minutes:

<http://www.c-spanarchives.org/program/292259-101>

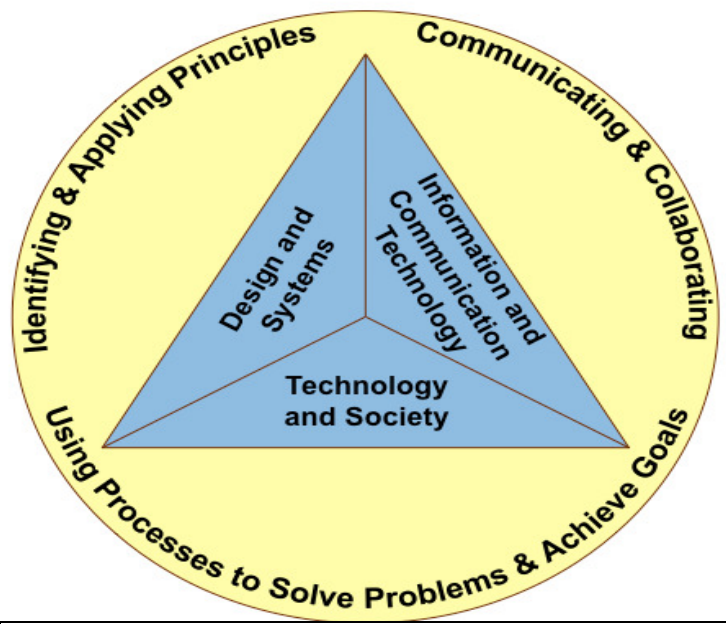
The Senate bill number is S.3043 and the House bill number is H.R.4709. The latest bill information and current list of sponsors can be found by searching the bill numbers here: <http://thomas.loc.gov/>

You can also use the above site to find out how to contact your senators and representative.

The goal right now is to bring this legislation to the attention of our US Senators and Representatives and ask them to cosponsor the bill. If you haven't already called, please call their DC office and ask for the name and email address of the staff person that handles education issues for the member of Congress (a.k.a. Education LA or Legislative Assistant). If they are unavailable to take your call immediately, leave a succinct message in their voice mailbox asking them to support the legislation.
~ Charley Corley, DTE

Technological Literacy

National Assessment of Educational Progress (NAEP) 2012 Technological Literacy



http://www.edgateway.net/cs/naepsci/view/naep_nav/9



Fitchburg State College
Contact: Dr. James Alicata jalicata@fsc.edu



Graduate Level Courses-- **Red Alert** -- If you want future PDPs or graduate courses at FSC, online, or hybrid please email Dr. Jim Alicata immediately and tell him what you want to learn and how you would like to get that education. Suggested email note should include:

1. Level of course:
 - a. Undergraduate
 - b. Graduate
 - c. Professional development
2. Technology Engineering Education Course
 - a. Communication
 - b. Manufacturing
 - c. Transportation
 - d. Construction
 - e. Bio-technology
3. Course setting:
 - a. Campus or Satellite location
 - b. Online
 - c. Hybrid
4. Tell him that you heard this from MassTEC!

FSC Tech Ed Advisory Committee

Dr. Alicata and the advisory committee are requesting suggestions to help improve the Fitchburg State College Technology Engineering Education program. Contact: Dr. James Alicata jalicata@fsc.edu

- I. Review of Current Curriculum
- II. Review of Practicum Program
- III. Current status of Tech Ed Students
- IV. Recruitment Initiative
- V. MTEL Issues
- VI. STEM Initiative and potential programs
- VII. Potential Placement opportunities
- VIII. Representation on Department Advisory Board



**Massachusetts Technology Education/
Engineering Collaborative**

2010 Annual MassTEC Conference October 15th 2010



We Need YOU!
To present at the
**Annual MassTEC
Conference**
<http://www.masstec.org/conference.html>



Cool Websites

- MasSTEC Facebook page is in the development stage
<http://masstec.org/>
- Webmaster, Steve Van Voorhis, has an amazing list of resources
<http://www.masstec.org/lists.html>
- ITEEA has officially become the "International Technology and Engineering Educators Association"
<http://www.iteea.org/>
- TEAP Article on TECH/ENG PIPELINE: Wanted: **Technology Education Graduates!**
<http://www.teap-online.org/publications/featured/wanted.htm>
- ITEEA STEM Connections
<https://www.iteea.org/Publications/STEMconnections/STEMconnections09-09.htm>
- Matthew Crawford explores the dichotomy between "knowledge" work and manual labor
<http://www.colbertnation.com/the-colbert-report-videos/231844/june-24-2009/matthew-crawford>
- **Education for Innovation: Gender Equity**
<http://www.educationforinnovation.org/>
- The Universal Problem Solving Model -- GIPOF
<http://www.authorstream.com/Presentation/DrRayMcCarthy-298535-gipof-thumbnail-sketches-concept-map-education-ppt-powerpoint/>

Recent additions to MasSTEC.org you may be interested in:

- **Urgent, the E 2 for innovation act important to you and your professional future.** Please consider spending a few minutes to send a letter to your elected officials regarding this legislation. Go to this link for a prewritten letter and address to send the letter and more information <http://masstec.org/new.html#e2forinnovationact>
- **Summer LEGO Engineering Institute for Educators** 2010 Tufts University's CEO Summer LEGO Engineering Institute
<http://masstec.org/new.html#tuftslego>
- The Massachusetts Department of Elementary and Secondary Education has created a web page for Science and Technology / Engineering Test Development
➤ <http://masstec.org/lists.html#mdesetdp>
- On February 1, ITEEA launched a new area of its website that will be completely devoted to "green" resources for teaching professionals. Located at www.iteea.org/Green/green.htm.
- The **Blueprint for Reform** The Reauthorization of the Elementary and Secondary Education Act is available for viewing. It would be the **next version of NCLB** <http://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf>
- **Dear ASEE K-12 Colleagues,** We are currently developing a **research and evaluation survey** instrument that could be used to measure changes in adults' (educators') thinking about engineering concepts and processes. Our survey needs respondents who are knowledgeable and who are not-so-knowledgeable about engineering. The survey, which takes 5-10 minutes to complete, please click on the link for more information <http://masstec.org/new.html#survey>
- Lexus has a great video about the manufacturing of the RX factory with curriculum content related to mass-production and the subsystems of an automobile. <http://masstec.org/lists.html#lexus>
- **Siemens** has a web site with **curriculum resources including lessons for grades 3-12**
<http://masstec.org/lists.html#siemens>
- **MassTEC has a list of online activities students can work with on the Classroom resources page. It is right at the top of the page, go to <http://masstec.org/lists.html>**

Thanks, Steve!

Please feel free to edit, slice & dice this Design Brief to fit your needs. Click here to get the WORD©2003 version for editing purposes: <http://masstec.org/curriculum.htm>

Everyone at Monument Valley Regional Middle School works to develop a spirit of inquiry, encourage personal excellence, and reach her/his potential based on individual learning style in a climate of understanding, compassion, and respect.

MVRMS Technology Engineering Education

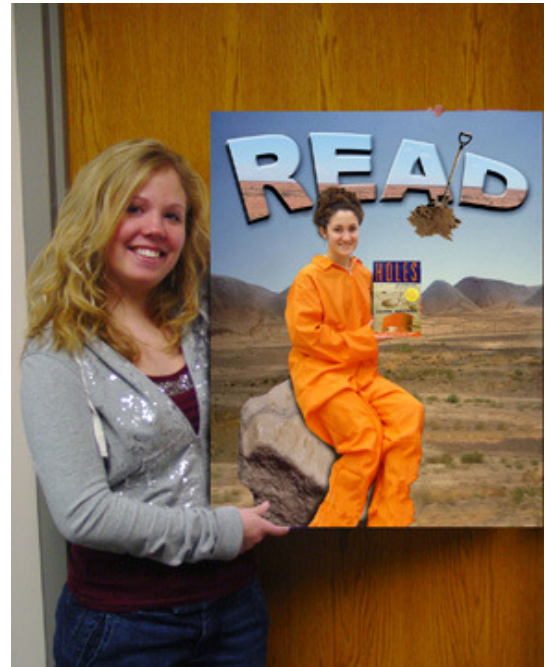
8th Grade

READ

Poster

Your READ Poster must:

- 1. Include you **HOLDING** your favorite book
- 2. Display the book cover clearly
- 3. Be an 8" x 10" x 300 Resolution Portrait
- 4. Display the word READ, which is readable & legible!
- 5. Have a background that you create that relates to the book's storyline
- 6. Contain 3 or more layers then save as a ".jpg"
- 7. Have a copyright sign & your name like so: © F. Name
- 8. Be PG rated (Don't Embarrass your Granny Rule)
- 9. Be completed in 5 class periods



Use this Design Brief as your Rubric...Check the boxes as you complete these steps!

DUE DATE: _____

Massachusetts S, T & E Framework #6 Communication Technologies

- 6.1 Explain how information travels through the following media: electrical wire, optical fiber, air, and space
- 6.2 Differentiate between digital and analog signals. Describe how communication systems employ digital and analog technologies such as computers and cell phones
- 6.3 Explain how the various components and processes of a communication system function.

*****FUN!!!*****