



## REPORT FORM FOR CONSULTATIONS

1. **Date:** December 1<sup>st</sup>, 2008
2. **Participants:** Patti Curtis, Boston Museum of Science, Washington Office.
3. **Team Attendees:** Jeanne Century, Steve Robinson
4. **Purpose:** The discussion focused on her suggestions for improving the STEM education.
5. **Key Points:**
  - **STEM has to include technology and engineering.** MA is the first state to include engineering in its standards. There need to be standards for technological literacy. The Museum has a National Center for Technological Literacy that focuses on this. Technology and engineering are overlooked. Rather than MSPs, there could be STEMPs. They want to see engineering standards incorporated into the school curriculum (scope and sequence). Some of these standards overlap with science standards.
  - **It is positive that museums are identified as providers of experiences for teachers and children in legislation.** The informal institutions are a good avenue for exploring and developing ideas in teaching engineering. ASTC is the primary organization that represents science centers.
  - **Addressing technology is a challenge because there is confusion in the language.** They want to distinguish between “information and communication technological literacy” and other kinds of technological literacy. One focuses on knowing the hardware and software; the other has to focus more on how to use it and moves toward overlap with design. Often, “preparing teachers for digital age learners” translates to teaching them how to use the equipment. There is also a problem with the overlap to Career and Technology Education (CTE) that causes loss of focus.
  - **These are workforce issues and as such are of concern and interest to NASA and the Department of Energy and other agencies.**
6. **Additional Documents:**

Recommendations for legislative priorities is attached.  
Information on the MA frameworks and their approach to addressing technology and engineering is attached.
7. **Additional Comments:**

There is apparently little attention given to measuring impact of their outreach and teacher professional development efforts. Either for internal, formative evaluation or summative evaluation for external purposes.
8. **Follow-up:**

Willing to continue to help.