

**Math and Science Advisory Council Agenda**  
**November 12, 2013 1:00 PM – 4:00 PM Meeting**  
**CNM Workforce Center**  
**(Exit 233, going W, from I-25)**

1. Call to Order

Malva Knoll called the meeting to order at 1:15.

2. Introduction of Members / guests (roll call)

Mr. Karl Agar II

Ms. Phyllis Baca

Dr. John Bellum

Ms. Selena Connealy

Ms. Karen Kinsman

Ms. Malva Knoll

Mr. Zachary Leonard

Dr. Richard Sonnenfeld

Dr. Hy Tran

Dr. Nader Vadiee

Mr. Charles H. Walter

Absent: Mr. Tomàs Atencio-Pacheco, Ms. Terri Nikole Baca, Ms. Patricia DiVasto, Ms. Ashley Ivins, Ms. Thansewi Martinez, Dr. Alexei A. Pevtsov

NM PED: Lesley Galyas, Marcia Barton

3. Approval of Agenda (Additions / Deletions)

There was discussion about amending the agenda to move Zach's presentation to new business, but it was decided to leave the agenda as is. Karen made a motion to approve the minutes. Phyllis seconded and the motion was approved.

4. Approval of Minutes

The minutes were approved without discussion.

5. PED Announcements (Lesley Galyas)

a. NGSS Update Request for recommendation of adoption by MSAC

Lesley explained that in order for Secretary Skandera to consider adoption of NGSS, the Secretary is requesting a recommendation by MSAC. The process from here involves a crosswalk between the current NM State Standards for Science and NGSS; a 30-day public review period; a public hearing; and then the Secretary will make a decision. Lesley is hopeful that adoption would happen during this school year (2013-2014).

John asked about how receptive PED is to NGSS adoption and Lesley reported that PED is receptive, evidenced by her new office space and staff and the fact that the CCSS effort will be strengthened by NGSS adoption and implementation.

Zach asked about the incentive for schools to implement NGSS. How will science count? Will it be part of the school grading system? Lesley reported that the NGSS planning period would include an examination about how to make science count as well planning for inservice teacher professional development, pre-service teacher preparation, and elementary instructional time.

b. Math and Science Partnership Federal Funding Update (Lesley Galyas)

Lesley reported that the RFP has been issued to solicit proposals related to collaborative math professional development. \$1.2 million is available for this effort (money from the federal government based on NM's population). The minimum requirement for proposals is that the lead partner must be a post-secondary institution with research efforts in science and mathematics and that another partner must be a low-income school from the K-12 arena.

c. Annual Report Progress Update: Draft report for 2012-2013 submitted to MSB/PED for final editing/production by Knoll/Tran.

Marcia reported that the Annual Report is at the PED chief editor and she anticipates that it will go back and forth for a few revisions before it gets presented to the Secretary's office. Hy thanked everyone who provided feedback at the last meeting, provided input on the graphs and stats, and emailed comments. Marcia also added her thanks to the MSAC members. Charlie offered to use Department of Cultural Affairs channels to make sure the report gets to the governor.

## 6. Committee Reports

a. Charles Walter report on ASTC Association of Science and Technology Centers meeting  
ASTC was held in Albuquerque on October 18-22. It is the largest science museum conference in the world with more than 1,700 delegates from 43 countries. It is estimated to have had an impact of \$1.6 million of economic impact on Albuquerque. The three local conference hosts were NM Museum of Natural History and Science, Explora, and the National Museum of Nuclear History and Science.

b. Malva Knoll report on New Mexico Science Teacher Association Conference with Math and Environmental Educators NMSTA endorses NGSS adoption.

Two hundred and fifty science, math and environmental educators attended a joint conference November 1-2 in Las Cruces. Malva reported that NMSTA endorsed the NGSS adoption. There were a few questions about NGSS: Why are state standards in regulation and not statute? Will NGSS apply to tribal/BIE schools?

c. Zach Leonard reports on the new teacher evaluation system, how it will drive the need for more professional development in NM, and provide recommendations for NM  
See Zach's PowerPoint and handouts for details.

## 7. Old Business

a. Review of MSAC Council Statutory Duties (Selena Connealy)

b. Determine MSAC priorities for 2014 using the three summary documents (Kids First 2012 Strategic Plan; Action Summit Plan 2012, Collective Impact Committees) Facilitated by S. Connealy

Selena led a visioning activity for MSAC members to help set priorities for the work in the coming year. Refer to the MSAC Prioritizing Exercise at the end of this document for details.

## 8. New Business

a. MSAC formal recommendation of NGSS adoption

Phyllis moved that **MSAC endorse the adoption of the Next Generation Science Standards by the State of New Mexico.** Karen seconded the motion and the motion carried unanimously, with no abstentions.

Karen moved that **a working committee of MSAC draft a letter to Secretary Skandera endorsing the adoption of Next Generation Science Standards and offering adoption and implementation recommendations. The letter will be vetted by the full committee before it is presented to the Secretary.** Phyllis seconded the motion and the motion carried unanimously

with no abstentions. Hy, Malva, Selena, and Richard volunteered to be on this working committee.

There was discussion about engaging a diverse group of stakeholders to solicit support for NGSS, including:

- New Mexico Science Teachers' Association
- Coalition for Excellence in Science Education
- New Mexico Academy of Science
- Partnership for Mathematics and Science Education
- School districts
- Teachers' unions
- High ed institutions
- NM PTA
- Superintendents
- NM Coalition for Charter Schools
- Business and industry

Items b, c, d were tabled until the next MSAC meeting

- b. Discuss solicitation of community resources and other experts for Council working groups
- c. Preliminary discussion of working group tasks
- d. MSAC members choose working groups

#### 9. Schedule of Next Meeting (January 2014)

The next MSAC meeting will be January 9, 1 – 4 pm at the NM Museum of Natural History and Science, Albuquerque. Charlie volunteered to provide refreshments.

#### 10. Call to Adjourn

The meeting adjourned at 4:25.

# MSAC Prioritizing Exercise, 12 Nov 2013

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## **Question: What can MSAC do to promote the improvement of STEM (education) in NM?**

Process: Everyone has large post-its; writes ideas, post ideas on the board in rounds. 3 rounds, then, group ideas & vote. Facilitated by Selena Connealy.

Post-its in random order. Grouping in order of votes. Some votes tied; listed in random order.

### **Clusters with 8**

- Build teacher leadership capacity
- Be a voice for supporting STEM teachers
- Make teachers feel important
- Be available to science & math teachers to hear suggestions/issues
- PD for PLC (prof. learning communities) groups within schools within subjects
- Consider ways to raise the level of professionalism in teaching to attract to people

### **Clusters with 8**

- Research PD hub models with collective impact approach
- Support State & International benchmarking team to bring best practices to NM
- Better studies to drive recommendations (meta-analysis)
- Encourage collaborative PD efforts statewide
- Finding & endorse best & proven practices in STEM

### **Clusters with 7**

- Review & advise on implementation of Strategic PED plan
- Be a sounding board for Lesley & Marcia & MSB
- Connect & align the system
- Develop budget priorities
- Align financial resources, policies for coherence

### **Clusters with 7**

- NGSS with PD & resources to implement
- Legislative testimony re: NGSS implementation needs

## Clusters with 5

- Promote inclusion of diverse stakeholders in MSB planning & implementation
- Awareness: Marketing of M & STEM
- Coordinate w/ other stakeholders w/r/t STEM

## Clusters with 3

- Improve teacher eval system

## Clusters with 3

- Create science van
- Provide rich summer experiences for students designed to engage & motivate
- Brainstorm & try ways to involve a broad base of students in science activities

## Clusters with 2

- Write editorials on science ed
- Include science in EPSS
- Require testing of science in all standardized tests

## Clusters with 1

- Provide incentive for districts to support on-going job embedded PD

## Clusters with 0

- Pre-service: Endorsing best & proven practices in STEM ed. In NM; dissemination of best & proven practices in NM; understanding the pipeline: teacher eval → preservice → licensing → PD → student success

## Leftover ideas (no pejorative intended with “leftover”)

- Evangelize NGSS
- Consider PD in a box
- Debug NGSS
- Advocate respect for teachers
- Network, network, network
- Involving professional scientific societies (APS, ASME, Sigma Xi, etc.)
- Advise/set guidelines for help from business & scientists
- Consider how to support NGSS
- Compile info on existing “best practice” PD in NM

- Provide experiences for families to learn together
- Best practice recommendations with resources to back (early College, HS)
- Become educated on best practices in STEM ed. & promote
- Outreach to public on “STEM for citizenship”
- Develop “policy” statement re: PD framework for PED
- Adopt NGSS
- Make official recommendation to adopt NGSS
- Recommend science van
- Stabilize evaluation system & stick to it
- Teacher PD & resources to back it
- Stabilize the target ASAP: Common core, NGSS, etc.
- Save ALP (alt. lic. program) at NM Tech
- Plan ahead
- Dissemination of NM studies w/ recommendation (note—better studies, meta-analysis)
- Advocate for NGSS adoption & implementation
- Support teacher PD