

Minutes are approved 8/25/2023

Math and Science Advisory Council Meeting  
May 5, 2023, 9 a.m.-4 p.m. Virtual

Agenda

1. Call to Order: Roll call of participants, identify any public members. 9:06.

MSAC

Angela Alderete

~~Deborah Elder~~

Monica Martinez-Archuleta

Kim Ayres

Nathaniel Evans

Paulo Oemig

Marcia Barton

Ling Faith-Heuertz (9:30)

~~Leandro Venturina~~

Dave Dooling

~~Tammy Gaudet~~

Ex Officio

David Ubinger (PED)

Shafiq Chaudhary (PED)

Public

Bridget Condon (LESC)

Marit Andrews (LESC)

Kay Morris (assoc. superintendent, Pojoaque Valley School District) (10:30)

2. Approval of agenda. Accepted 9:11.

3. Approval of minutes from February 3, 2023 meeting. Attendees given time to review. Evans moves to approve. Alderete seconds. Approved 9:14.

4. Public Comment. Invited at 9:14. Andrews declines for the moment; just want to listen. Condon also just listening. First interim LESC meeting is May 15-16, planning a deep dive into math over next two years.

5. MSB Education Session. 9:18. Chaudhary provides link and a few minutes for MSAC to review. Open for questions, 9:28. Chaudhary explains plans for participating in Math Pathways Working Groups and giving them some independence of action. Martinez-Archuleta is part of envisioning math group.

Barton asks if schools can use funds to buy OpenSciEd kits. Districts will be able to do so in summer 2024; publishers submit materials for review in summer 2023; adoption year is school year following review. Will research about K-12 out-of-school time mandated by HB 130. Alderete asks if different vendors can be selected for various grades. Chaudhary says districts can decide which materials to adopt from approved list. Barton expands on OpenSciEd as a program to make instructional text freely available for download, although kits cost \$400–\$500 per unit, hence question about using textbook funds to buy kits. Chaudhary said they should be covered by instructional material funding and that the legislature specifically included it. Alderete added that the cost of lab materials must be considered when adopting new texts. Availability announced through NM STEM Connect among other venues. (Oemig temporarily offline.) Martinez-Archuleta asked if MSB will make an open call to industry to participate in Math Pathways. Chaudhary unsure; MSAC will be able to add stakeholders as needed. Following spirit of HB32 to have two outdoor learning specialists. Working to ensure that out-of-school learning is coherent across all levels. Wants to get an idea of “what is out there” in order to ensure that coherence. Needs MSAC’s help in identifying potential industry partners. Oemig asks about Knowledge Matters, which was asked to review instructional materials in state.

(Break, 10:03–10:15)

6. Reporting out from Math, Science, Computer Science, and Outdoor Learning working groups. Cannot go into breakout rooms; have to go into separate Zoom meetings (10:23–32). Ubinger summarizes MSB planned activities (summary in appendix). Martinez-Archuleta expands on details of math working group. Alderete summarizes science working group and discussion of alternative science credits. Proposed implementing CTE teachers get accredited in science so they know and can align with standards, perhaps a mini-semester class. Focused on competencies for entry level and decided state standards need to be updated to align better with NGSS. Alternative licensure apparently has no specific requirements for science classes other than having a BS or BA. Barton asks that MSB research the issue. Chaudhary will get guidance from Professional Licensure Bureau. Faith-Heuertz said CS focus was identifying courses that satisfy math requirements and what courses students may need in the future, micro-credentialing for teachers. Chaudhary said micro-credentials are good, but CS K-12 standards are optional now, so many districts do not teach them. Focus is how to integrate into existing instruction. Barton summarizes Outdoor Learning (summary in appendix).

(5-minute break, 11:20-11:25)

7. Discussion: Working Definition of STEM for the MSAC. Oemig asks for 20-minute Jamboard session on how to define STEM Education with respect to math, science, CS, and outdoor learning given the fluid nature of the term since it was introduced 20+ years ago. Barton suggests a chat waterfall on what STEM means to each of us. Followed by discussion of viewpoints. Barton suggests going to Jamboard at 11:53. Oemig suggests chat captured enough information and moves adjournment for lunch.

(Lunch, 12–12:45)

8. Overview of current STEM Strategic Vision.

9. Overview of Strategic Vision updates needed.

10. Are these the right “Goals”? Are these the right “Needs”?

Barton explains how Strategic Framework developed by identifying two goals and working backwards to identify needs, drivers, and strategies to achieve them, including responding to the outcome of the *Martinez and Yazzie Consolidated Lawsuit*. Breakout groups will review first three lines of needs. Also reviewed 2022 *Comprehensive Strategic Plan*, pages 3 and 5, and the *Vision for STEM Education* as keys to reviewing the Framework. One concern is making Framework culturally responsive, including occupied land acknowledgement. Worked on Jamboard until 2:03

(Break, 2:03–2:15)

11. Breakouts of Strategic Vision working groups on different aspects of the STEM Strategic Vision. More Jamboard sessions and group discussions on updating the first three sets of Driving Statements etc. in Strategic Framework.

12. Report out. (2:45). Further discussions and edits to Jamboards. Final Jamboards downloaded as PDF in appendix. Finish at 3:18.

(“brain break” 3:18-3:20)

13. Strategic Vision Next Steps. Defer to later breakout meetings.

14. Preparing for the 2023 Annual Report. Oemig reminded Council that it has a set of deadlines for finishing this year’s report by Nov. 30. Oemig advocates limiting number of critical issues to avoid diluting their impact or overwhelming the reader. Need to request data as soon as possible for timely inclusion in report. Barton notes that identifying Critical Issues is one of MSAC’s more important roles as these alert Governor and Legislature to next steps state should take.

## **2023 Report Timeline**

The Statue for Mathematics and Science Education Act 22-15E-1. States in E. produce an annual report on public elementary and secondary mathematics and science student achievement to be submitted to the department, the governor and the legislature no later than November 30 of each year.

### **Math and Science Advisory Council (MSAC) Ongoing:**

- Collect information on MSAC activities

**January:** MSAC discuss Critical Issues [May meeting discussion]

**March:** MSAC Finalize and begin writing Critical Issues recommendations [PENDING]

**April:** MSAC Critical Issues are finalized [PENDING]

**May:** Final Data Requests & MSAC Discuss Critical Issues [PENDING]

- MSAC makes requests from MSB any data to be used in the current report
- MSB begins collecting data and sends data as it becomes available

**June/July:** MSAC comments on data available

**August:** MSB and MSAC create a draft of the report

**September:** MSAC revise and finalize the draft report

**By October 1 :** MSAC delivers draft report to MSB, MSB will route report within PED

**November:**

- November 30: MSB will deliver the report to the Legislature and Office of the Governor, MSAC will distribute the report to stakeholders.

**Side note:** Governance documents shall be reviewed and reaffirmed yearly at the last meeting that occurs before December 31. Amendment to this governance document shall be made by a simple majority.

### **MSAC Data request as of 05/05/2023**

- Assessment of science readiness (Grades 5, 8, 11)
- MSSA (Grades 3-8)
- SAT (Grade 11)
- Course Taking Trends for Mathematics
- Course Taking Trends for Science (High School)
- Dual Enrollment
- AP math, science, and computer science course taking data with pass rates
- STEM Education Expenditures, including CS and Outdoor Learning
- HS graduation rates - more for MSAC understanding
- Teaching vacancies - more for MSAC understanding
- CS goals and objectives- data For 2023 report we need to make sure to include 2021-22 data
- Schools teaching in a dual-language program (secondary school)

- Comparison data (science, math, and English) between public schools or districts including charter schools

15. Reflections on this meeting. Aug. 25 meeting will be in Santa Fe. Oemig thanks Barton for managing meeting. Adjourned at 3:47.