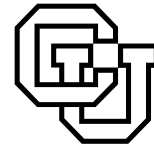




Rocky Mountain Middle School Math and Science Partnership



Summer, 2006 Newsletter

NEWS FROM YEAR TWO

Michael Klentschy Visit:

On Tuesday, Sept. 19, 2006, RM MSMSP and Front Range BOCES will host Dr. Michael Klentschy in a full day session: **Increase Student Learning Emphasizing Science-Literacy Connections.** Dr. Klentschy is the Superintendent of El Centro Public Schools, California. He has a proven record in developing successful programs that use literacy strategies and science content to reduce the achievement gap and increase writing scores. The intended audience includes Superintendents, Central Office Personnel, Principals, Leadership Team members, and Teacher Leaders. It will be an exciting day!

Project Director Change:

Effective July 1, 2006, Doris Kimbrough and Carole Basile will share the role of RM MSMSP Project Director as Barbara Bath resumes retirement. Alicia Andersen will continue as Project Coordinator.

Leadership Team and Management Team Meetings:

Management Team and Leadership Team meetings have occurred as scheduled. All K12 districts have been represented at each of the Leadership Team meetings. Both meetings provide excellent communication opportunities. Leadership Team meetings for 2006-2007 will be: August 10, 2006; Sept. 19, 2006 (Klentschy); Feb. 8, 2007.

Everitt (Jeffco) Experiment:

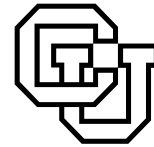
Our largest partner district, JEFFCO, is sub-divided into "articulation areas". We agreed to offer the Algebra class in the Wheat Ridge Articulation Area at Everitt Middle School. In order to encourage and support her teachers, Everitt's principal enrolled in the course as well, a brave endeavor as her background and experience did not involve mathematics. In addition to the principal, the librarian, a social studies teacher, and the special education teacher also enrolled in the course so as to better support the students at Everitt and integrate more mathematics into the curriculum. The participation resulted in the development of a strong professional learning community, and we have continued the interaction with the Mathematics of Change course, which was offered there this spring.

Adams 14:

The summer camp opportunities at CSU, Metro State and Ft. Lewis were areas of focus for ACSD 14 this year. Over thirty applications from ACSD 14 students were collectively received at the universities. This was a result of intense recruitment through parent information sessions, promotional literature and providing a contact for the students at each site. The contact worked with students to complete the applications, write letters of recommendation and continually follow up with students and parents regarding the progress on the applications. ACSD 14 recognizes the great educational value the summer camps provide for their students. It is their intention that the promotion



Rocky Mountain Middle School Math and Science Partnership



of these camps remains constant. In addition, the Adams 14 math and science teachers will meet this summer for horizontal and vertical articulation meetings across the two middle school sites. During this time, teachers will create common assessments to monitor students' growth according to the state assessment framework indicators.

Elizabeth:

Two Elizabeth teachers attended a science workshop offered through the Public Education and Business Coalition. The Elizabeth teachers were enrolled in several of the Summer Academy courses and have successfully completed their Structured Follow-up. RM MSMSP supported a teacher in the District to function as a mentor/coach which she did throughout the school year

Englewood:

Englewood Public Schools was an active participant in the Rocky Mountain Middle School Math Science and Partnership for the 2005-06 year. Fourteen of the seventeen middle school math and science teachers took one or more classes in the spring, summer, and fall (84%). The majority of those teachers were also able to fulfill their Structured Follow-up obligations and implement innovations in their classrooms related to the courses they took.

Gilpin:

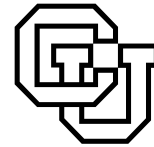
Particularly in science, the middle school math and science teachers in Gilpin County have clarified their vision and plan to improve student achievement. When asked what was being done to increase scores, it was noted by teachers and administrators that setting higher expectations for students, RM-MSMSP courses, new curriculum materials, and teachers' dedication to collaboration had all played a part. Three of 4 of our middle grades math and science teachers will complete summer RM-MSMSP university coursework to increase their content and pedagogical knowledge of middle school mathematics and science. Three teachers who complete coursework last summer also completed the structured follow-up. The district believes that through the RM-MSMSP, teachers have increased their skills, content knowledge, and resources. Teachers were provided the opportunity to work collaboratively to identify how new understandings will come into play specifically within our district, especially for science. The result is an integrated 5th – 8th science curriculum.

Brighton:

Brighton 27J sent teachers to the PEBC Science and Literacy workshop in January and May. At this workshop teachers learned ways to help students with content literacy. The teachers came back very excited and full of new ideas to help their students achieve in Science. Brighton had two days of classroom laboratories for mathematics teachers. In addition to sending teachers to RM MSMSP courses, the teachers who were able to participate became very close and continued to work with each other after the lab day. Many ideas were exchanged especially around how to help struggling learners.



Rocky Mountain Middle School Math and Science Partnership



Mapleton:

Mapleton provided mentoring and coaching support for teachers who attended the Summer Academy and are enrolled in Structured Follow Up, recruited middle school math and science teachers to participate in the Summer Academy 2006, implemented assistance from CU Students in middle school math and science classrooms (Progress Labs), and recruited middle school and high school students to participate in the Metro Summer Camp and CSU Math Science Camp.

Research:

Two events were held in conjunction with focusing and streamlining our research efforts. A "Research Day" was held in early January for higher education faculty, leadership team members, and others associated with the partnership (e.g. graduate associates and post-docs) to probe interests and bring together people with similar research interests around the project so as to foster collaboration and initiate coordination between the evaluation team and other project players around the area of data collection and dissemination. In March, a "Research Summit" was held in Ft. Collins that included leaders of the evaluation team (Cobb, Heath, Conway, Walters, & Connors) and P.I. (Kimbrough) and Co-P.I. (Basile). A research matrix that was initially sketched out by Cobb & Basile, was fleshed out in detail, and this matrix will drive the data gathering, analysis, and interpretation within the context of the project's research agenda.

The Center for Applied Science and Mathematics Innovation and Competitiveness CASMIC

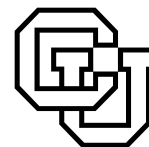
The collaboration among various participants in the RM-MSMSP has fostered the development of the CASMIC initiative at UCDHSC. This Center will focus efforts at securing funding for a variety of initiatives in the realm of science and mathematics education, linking to local and national industrial and informal science education institutions, and leveraging and integrating on-going projects with new ones. Carole Basile will serve as CASMIC Director.

Master's Degrees

The RM-MSMSP worked with members of the School of Education and Human Development (SEHD) at UCDHSC to implement the approval of twenty-one hours RM-MSMSP coursework (both content-focused and SFU) to count towards the SEHD Master's Degree in Curriculum and Instruction. Many of the participant teachers are availing themselves of the opportunity to use the partnership courses to earn a Masters Degree. The first group may complete the degree within the year.



Rocky Mountain Middle School Math and Science Partnership



Seven classes in Year One Summer Academy:

The Development and Instructional Teams developed and implemented our first cohort of classes which were offered to large enrollments during the summer 2005. Each summer course was complemented with a Structured Follow Up component that was implemented in the fall and/or spring. (see the table at the end of the newsletter for enrollment)

Academic Year Classes:

We offered four academic year classes: Biology, Chemistry, Algebra, & the Mathematics of Change (a newly developed course). We coordinated with NSF to gain permission to offer a stipend for the academic year courses. This incentive greatly enhanced our enrollments and made clear to us the importance of rewarding teachers for their professional learning efforts.

Year Two Summer Academy:

The Development and Instructional Teams have developed eight additional courses to add to the initial seven, making up our full complement of fifteen courses. All fifteen will be implemented in the Year Two Summer Academy, and current enrollments are encouraging. The new courses are: Discovery and Use of the History of Math; Light Color, and Geometrical Optics; Ecology, Biodiversity, and Adaptation; Math Modeling; Interactions of Elements and Compounds; The Mathematics of Change; Discrete Mathematics, and Earth Field Experience. Corresponding SFU courses are scheduled for the fall and spring semesters. Course locations include Skyview High School (Mapleton), Flood Middle School (Englewood), Adams City Middle School (Adams 14) Jeffco Ed Center, N. Arvada Middle School, Wheat Ridge High School (Jeffco), Colorado School of Mines, University of Denver, and UCDHSC.

Celebration Day:

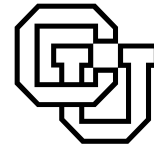
At the culmination of both semesters of Structured Follow Up (SFU), participant teachers presented their Innovation Projects in a poster session held on the CU-Denver campus. In addition to the presentation of their posters, teachers received certificates prepared for them by Congressman Udall's office, and received the praise and congratulations of assorted higher education administrators and representatives from the staffs of legislators. At the spring celebration day, the UCDHSC Provost Mark Heckler spoke to the teachers about the importance of the work they were doing and its place in our competitive world.

Web site:

The web site has proven to be very useful in sharing information about the project and providing a mechanism for course application and registration. The SFU innovation abstracts were submitted online so that others might share in the concepts. There is also a section where teachers can share stories. We have posted on MSPNet. The Blackboard site has not been utilized as much since the web site has become more active. Front Range BOCES provided support in updating and creating the website.



Rocky Mountain Middle School Math and Science Partnership



Progress Labs:

Although the Progress Labs are not yet in the form we envisioned, significant progress has been made. Undergraduate and graduate students were recruited and matched with teachers in our participant districts. These undergraduate and graduate students worked with various groups of students in math and science as tutors, role models and mentors. An important lesson learned is the need for better supervision and communication among the teachers and students. This summer, specific modules (two in science, one in math) will be developed for fall implementation by graduate and undergraduate students or teachers who will be trained in their implementation. These modules will have an inquiry focus and incorporate the 5 "Es" of the Learning Cycle and will be offered to teachers as supplemental to the regular curriculum. The following message came from one of the teachers who hosted the volunteers:

Mary and Nancy were two volunteers in my sixth grade science classroom for the 2006 school year. In twenty three years of teaching, these two ladies were definitely of the top five best I have had the privilege of working with. Both were positive, reliable, responsible, dependable, and hard working! They were every teachers' dream volunteer. Both Mary and Nancy went above and beyond even my expectations.

For example, I would have them help my students to write current science article summaries. Both would bring articles of interest in (with copies) for the students to get started on. It was a tremendous help. Mary speaks fluent Spanish so she was able to provide bi-lingual education to my Spanish speaking students. All the students they worked with looked forward to their help each day. Both Nancy and Mary anticipated what I needed for help. They were on top of everything. I am truly grateful for their help and dedication to kids. I give them both a five star rating.

ELL Progress and Recognition:

The RM-MSMSP has focused a significant amount of effort and attention on the area of instructing English Language Learners (ELL), as this serves a tremendous need within our partner districts. Development and instructional teams received training in sheltered instruction and lesson scaffolding so that they could incorporate and model those elements in their courses. In addition the SFU courses included several ELL-focused activities that were focused around the science and mathematics content that teachers could implement in their classrooms. Tying the ELL instructional strategies to the specific math and science content has served a particular need for our participant teachers and has garnered national attention for our project.

[illegible]