

**Dickinson-Iron-Menominee
Mathematics, Science and Technology Center
2003 - 2004**

Overview of the Year's Accomplishments:

1. Improving Teacher Preparation

The Center coordinated professional development in mathematics, science and technology over the course of the school year using multiple day workshop series. We conducted a needs assessment using a teacher survey, MEAP data, principal and superintendent questionnaire and school improvement plans.

2. Building Collaborative Partnerships

The Center worked with the Dept. of Natural Resources, International Paper, and the high school science teachers using GIS/GPS to map, study and formulate school forest management plans, assist the DNR in ground truth data and test a model for species tracking. We worked with the Challenger Center, the Chamber of Commerce offices, Rotary and Kiwanis clubs and the local media to do two community exploration evenings as part of our "Journey through the Universe" program. Center received \$3,000 from International Paper to help cover "Journey through the Universe". WE Energies continues to help fund the Summer Science Camp program, the Invention convention and the Regional Science Fair. Center Director was named Outstanding Educator by the Dickinson County Soil Conservation District. The "Doc's, Jocks and Geeks" \$158,047 grant was chosen Winner of the 2004 Education Excellence Award for Technology Integration from MI Assoc. of School Boards. This grant featured the local hospital, county health department and area schools high school math and physical education teachers and students, as partners with the Center.

3. MEAP Data Analysis

The Center analyzed six of the school districts MEAP data to produce usable reports for classroom teachers and administrators. Each grade and content area tested was covered. Reports included Item Analyses, Frequency Distribution, State/ISD/Local comparison, Demographics, Strands proficient/not proficient. Spreadsheets and graphics were created using Excel, Testwiz and the MEAP Treasury site.

4. Curriculum Support was also supplemented by way of maintain two Lending Resource Rooms in different locations, supplying JASON curriculums, the Center's web site with current web resources and Journey through the Universe materials. The quarterly newsletter distributed information on free materials available, teacher grant opportunities and professional development opportunities.

5. Student Services

We completed our eleventh year of the eight week summer science camp enrolling over 200 students and logging in 40 days of hands-on instruction. The Center sponsored an Invention Convention for sixth, seventh and eight grade students with 150 students

participating. The Regional Science Fair was held for fourth and fifth grade students with over 250 students exhibiting experiments.

Spotlight on Professional Development:

The Center continues to serve as the primary source for professional development in the areas for mathematics and science in these three counties. Our teachers participate in the MMLA trainings and Building a Presence in Science as state and national initiatives. Additional workshop included astronomy, microscopes, TI graphing calculators, a week long GIS Institute drawing teachers from a wide geographical area and AIMS.

Focus:

New this year was the professional development component of the Challenger Center's Journey through the Universe. We are one of four communities selected from across the United State last year to be part of this three year program. NASA and the Challenger Center sent a team of 6 scientists, engineer and science educators to our "community" for Six days. Lead teachers in the elementary, middle school and high school received a full day of training designed to help them serve as science training facilitators. Later a day long workshop was held for elementary teachers and one for middle school and high school science teachers. Curriculum materials were distributed, hands-on activities were modeled and later the scientists, engineers and science educators made classroom visits.

One hundred ten teachers were involved in the professional development which covered 18 hours of instruction. The instructors not only covered content but also modeled best practices in teaching. All school districts from the three counties had teachers who participated. Two community science exploration evenings were conducted by the visiting teams as well. These were designed for families as well as our teachers and their students.

The "Journey through the Universe" curriculum materials align with the Michigan Curriculum Framework and covered earth science benchmarks. E-mail addresses of the visiting team were freely distributed and teachers were encouraged to keep in touch and have their students e-mail questions when ever they could. We will start year two of the program in October of 2004.

Spotlight on Underachieving Schools

Last year there were no underachieving schools in the Dickinson-Iron-Menominee service area.

Summary of the Year.

2003-2004 proved to be a fruitful trying year. With the reduction in funding from the State of Michigan, the staff deduction was severe and necessary. We have no full time staff, no consultants.

The Center continues to serve teachers, students and the community in the basic service areas due mainly to a large federal five year grant that has just ended and several smaller grants which the Center had received from various sources.

Leadership: The Center Director continues to work with local companies, the Chamber of Commerce, state and local agencies, and school administrators to expand the role and importance of math and science education. The Director sits on the Upper Peninsula Center for Educational Development Board which meets monthly. The Directors of the Centers in the Upper Peninsula have also started to meet quarterly utilizing ITV to conduct meetings. We are trying to maximize resources and joint venture whenever possible.

Curriculum Support: The Center has maintained the Lending Resource Rooms at the Dickinson-Iron ISD and the Menominee ISD. Teachers have a listing of available materials and can physically come and check out the materials or e-mail a request and supplies are shipped out to them. No new items were added to the inventory due to current budget restraints. Support for the JASON program, the Rockets for Schools and the "Journey through the Universe" were curriculums, hands-on materials and funds for travel to competitions. The Center's web site with current web resources and the quarterly newsletter distributed information on free materials available, teacher grant opportunities and professional development opportunities.

Student Services: The Center supported Family Math/Family Science Nights done using local teachers. The eight week Summer Science Camp completed its eleventh year, hosting sessions for K through 8th grade, enrolling over 200 students and logging in 40 days of hands-on instruction.. Each grade level is a week long and a different theme looking at the world of science. Parents are asked to fill out an evaluation sheet at the end of the week. Ratings remain extremely high as to the child's motivation and excitement about "doing" science. The Center sponsored an Invention Convention for sixth, seventh and eighth grade students with 150 students participating. The Regional Science Fair was held for fourth and fifth grade students with over 250 students exhibiting experiments.

Budget Discussion:

The Dickinson-Iron-Menominee Center has reduced staff with currently a part time director, a less than quarter time secretary and the ISD technology coordinator serving as technology and math consultant on a limited bases. We have cut programs, eliminated some student activities such as Girls + Math + Science = Success, and reduced the amount of professional development offered to teachers. While we continue to operate the two lending resource rooms, no new supplies kits or equipment were purchased.

The Center was part of a five year \$8.3 million grant that was shared by three ISD's. This grant is now completed. Due to that funding as two other smaller grants, the Center was able to complete the work of the past year. Based on that combined funding (2003-2004), we are carrying over \$56,000 to help cover this year's work. This year will be greatly limited in what we can afford to offer.

Examples of Impact:

Impact on Students	Impact on Teachers
<ul style="list-style-type: none">• 200 elementary and middle school students participated in a week long hands-on science camp.• 150 middle school students completed projects for the Invention Convention• 250 upper elementary student completed projects utilizing the Scientific Method for the Regional Science Fair• 24 middle school students participated in the Rockets for Schools program. The IM team competed against other middle school and high schools from Michigan, Wisconsin, Iowa and Illinois. They were edged out by two high school teams and one middle school team taking second place.	<ul style="list-style-type: none">• 32 Participated in data analysis workshops to better understand where curriculum/teaching strategies need to change..• 660 hours of professional development were logged in during the "Journey through the Universe" Week.• Carol M. White Physical Education Programs 2002-03 "Doc's Jocks and Geeks" \$432,685 (shared with 4 other ISD's)• International Paper 2003 "Journey through the Universe" \$3,000.• Final year of the US Dept of Educ. \$8.3 million shared with two other ISD's.

Impact on Schools

- All districts participated in curriculum mapping activities to better align their curriculums.
- All districts participated in MVHS, efforts coordinated by the Center
- All districts had teachers trained in the i3 technology integration five day program.
- School Forest Management Plans developed saving the districts \$.
- Teachers used materials from the Lending resource room to help supplement their supplies and equipment in teaching math and science saving the districts \$.
- Districts receive MEAP Data analysis at no charge.
- Districts receive all professional development from the Center at no cost.
- MEAP science and math scores above the state average. In all districts.

Impact on Communities

- Family Science Nights
- Community Exploration Nights offered by NASA and the Challenger Center Staff (over 600 in the audiences)
- Students and teachers had the opportunity to work with outside agencies such as the DNR and local industries.
- 28 professional (science or math) volunteered as judges for the Invention Convention and the Regional Science Fair.
- 18 adults volunteered as Ambassadors for the “Journey through the Universe” program