

Students in Lapeer County will develop mathematics, science and technology literacy for success as problem-solvers in student and adult roles

Lapeer County Mathematics/Science Center 2001-2002 Annual Report

The Lapeer County Math/Science Center is one of thirty-three regional centers in the State of Michigan. *The mission of the center is to provide leadership, programs, and services to support students and teachers as they work to master complex thinking skills, use problem-solving strategies, and understand the connections of science, technology, and mathematics to the real world. The Math/Science Center will also strive to increase interest, involvement, and understanding in science, mathematics, and technology among teachers and students to prepare them for full participation in a democratic society.* The Center serves five school districts, one charter school, and four parochial schools within the boundaries of Lapeer County. Approximately 750 teachers and 15,000 students are the target audience of the six basic services intended to promote quality mathematics and science education for the students of Michigan.

Overview of the Year's Accomplishments

- ❖ Increased the number of Single Session Activity participants from 653 to 1257. One reason for this significant increase was the addition of a Mathematics Coordinator who delivered 36 Mathematics events involving 324 participants as compared to one event for eight participants the previous year. Participant numbers in Science, Technology, and Integrated M/S/T also increased from the previous year.
- ❖ Supported the development and implementation of Math/Science/Technology Problem-Based Learning Academies at each local district high school in Lapeer County
- ❖ Completed a ten-year review of the Lapeer County Agriscience and Natural Resources Program and made recommendations for the ongoing improvement of that program
- ❖ Implemented the Solving Mathematics in Life Experiences (SMILE) Program with 116 third through sixth grade classrooms involving 2973 students.
- ❖ Moved the Center to a new facility, which enabled greater numbers and higher quality of professional development for teachers and administrators.
- ❖ Developed additional enrichment opportunities including Life of a River, Space Camp, RoboLab II and III, and Amusement Park Physics.
- ❖ Developed and distributed a Mathematics Problem Solving Program in Lapeer County schools and shared it with other Mathematics and Science Centers.
- ❖ Restocked consumable materials for all of the hands-on science units/kits for elementary teachers.
- ❖ Developed assessment items for six elementary science unit/kits currently used by Lapeer County teachers.
- ❖ Provided training for and distribution of Life Cycles of the Animals Unit/kit, and enhanced the Motion and Machines Unit/kit.
- ❖ Trained additional teachers in Problem-Based Learning.
- ❖ Provided leadership at the state, regional and local level to support improvement of mathematics and science instruction and achievement.
- ❖ Loaned science materials and kits to local district teachers.
- ❖ Participated in the distribution and training of the MI ClIMB CD ROM to mathematics and science teachers.

Organization of the Report

This report is organized around the Lapeer County Math/Science Center Three-Year Strategic Plan for 2000-2003. The Strategic Plan is based on the needs of Lapeer County school district teachers and students. The Plan is organized around a common set of services provided by Center staff and eleven programs that are directed toward the six basic services areas: Leadership, Professional Development, Student Services, Curriculum Support, Community Involvement, and Resource Clearinghouse. Performance Effectiveness Indicators and Organizational Effectiveness Indicators are also built into the Strategic Plan within each of the programs and staff services directed toward local district needs.

Educational Leadership

Focus of Leadership Services for 2001-2002

- ❖ Increase Lapeer County Math/Science Center resources to meet the needs identified through collaboration and input from local school districts.
- ❖ Promote a shared vision of mathematics and science education through center programs.
- ❖ Develop shared leadership and collaboration with local, regional, and statewide organizations, and agencies, and professionals.
- ❖ Employ and organize Center staff to facilitate science and mathematics improvement efforts in local districts.

Activities and Accomplishments:

The Lapeer County Math/Science Center holds monthly advisory meetings with representatives of the Lapeer County School Development Resource Team. The planned activities of the Center are a direct result of the collaboration and input from this group of curriculum specialists and administrators. The leadership of this group shapes the programs and services, which support the improvement of mathematics and science education in Lapeer County.

Through Center leadership, collaboration with local school districts, use of other grant resources, and in-kind support the total Center revenue was over four hundred eighty-eight thousand dollars.

Leadership to promote a shared vision for mathematics and science, to implement the Michigan Curriculum Framework, to develop instruction that reflects best-practice, and to promote interest in and exploration of math and science career pathways was an essential component of each of the following Center programs: Lapeer County Agriscience and Natural Resources Program; Mathematics Assessment Project; Elementary Science Curriculum Support Project; Problem-Based Learning with Technology (PBL); Help On Time for Technology Program; Teachers Teaching with Technology (T³); Enrichment/Accelerated Programs; Project Leader (Building a Presence for Science); Online Information, Networking, Distance Learning, and Collaborative Projects; and Secondary Math/Science/Technology - Problem-Based Learning Academies.

Participation in collaborative local, regional, and statewide projects and organizations has always been a priority for center staff. Expertise and Leadership has been provided by center staff through involvement in the following initiatives and organizations:

- ❖ Greater Thumb Telecommunications Consortium
- ❖ Lapeer County Technology Coalition
- ❖ Lapeer County Gifted/Talented Planning Committee
- ❖ Lapeer Interactive Telecommunications Educational System (LITES) Application Team
- ❖ Lapeer County School Development Resource Team
- ❖ Southeastern Michigan "Closing the Gap" Science Leaders Group
- ❖ Michigan Mathematics and Science Centers Network Executive Board

- ❖ Michigan Mathematics and Science Centers Network Leadership Committee Chairperson
- ❖ Michigan Mathematics Leadership Academy Task Force Chairperson
- ❖ Membership in National Organizations including National Council of Teachers of Mathematics (NCTM), National Science Teachers Association (NSTA), Association for Supervision and Curriculum Development (ASCD), and National Staff Development Council (NSDC)
- ❖ Membership in Statewide Organizations including Michigan Council of Teachers of Mathematics (MCTM), Michigan Science Teachers Association (MSTA), Michigan Association of Computer Users in Learning (MACUL), Michigan Middle School Mathematics Reform Project (M³RP)

All staff positions of the Lapeer County Math/Science Center are filled with highly qualified, energetic individuals who are shaping the direction of mathematics and science education in Lapeer County. This group of educational leaders is charged with working closely with local district teachers and committees to meet the needs identified in the areas of data analysis, curriculum alignment/development, instructional strategies, assessment, resource support, and technology integration. Local teachers and administrators view the Lapeer County Math/Science Center as a prime source for information about regional, statewide, and national initiatives as well as school improvement ideas.

Professional Development

Focus of Professional Development Services for 2001-2002

- ❖ Provide professional development relative to the needs identified in the strategic plan.
- ❖ Engage teachers in professional development that models and leads to implementation of state and national standards in content, teaching and learning, and assessment.
- ❖ Develop ongoing professional development programs that support hands-on, constructivist, inquiry-based, or problem-based instruction.
- ❖ Provide opportunities to develop instructional leaders in mathematics and science.

Activities and Accomplishments:

Professional Development activities focused on four primary needs identified through a variety of needs assessment measures:

- Integration of technology into the curriculum as a support for learning/instruction.
- An articulated, coordinated K-12 curriculum with appropriate instructional strategies.
- Classroom experiences meaningful to students' interest and needs with connections to the real world.
- Training in the use of a variety of instructional strategies that meet state and national standards, engage students through inquiry, and promote conceptual understanding.

In 2001-2002, there were 653 different participants in 93 professional development single sessions, for a total of 4675 program hours -- an average of 7 hours per participant. The table below describes those who participated in professional development provided by the Lapeer County M/S Center.

Table 1: Participants Receiving Professional Development

Participants	# of Indiv.	Total Hours	Reported Gender**		Position					
			Males	Females	Admin	Math Tchrs.	Science Tchrs.	Tech Tchrs.	Combined Subject	Other or Unknown*
Pre-K	56	647	4	52					56	
Elementary	290	2289.5	41	244	11	2	2	1	253	21
Middle/Jr. High	41	198.5	18	22	2	8	10	1	1	19
High School	100	451.5	55	44	2	22	14	4	1	57
Others*	166	1089.25	48	108	48	12	6	5	12	83
Total	653	4675.75	166	470	63	44	32	11	323	180

* Other includes persons who work across levels, are not teachers or administrators, or did not indicate position. ** All individuals did not indicate Gender.

Professional development was delivered in many ways, depending on the identified needs and the program of which it was a part. Two primary formats included: (1) single events, lasting from a portion of one day to several consecutive days, focused on a particular topic, skill, or issue, and (2) multiple session events, either a series of sessions with a single focus or a sequence of sessions, one building on the previous one, conducted periodically over a several week/month period.

Table 2: Single Session Activities

		Math	Science	Technology	Integrated M/S/T	Other	Total
Pre-K	Events						
	Hours						
	# Participants						
Elementary	Events	24	9	6	2		41
	Hours	42	34	29.5	2.5		108
	# Participants	217	177	146	43		583
Elementary & Mid/Jr. High	Events	1			3		4
	Hours	1.5			6.5		8
	# Participants	31			53		84
Mid/Jr. High	Events	3	2	1	2		8
	Hours	8	9	1	4		22
	# Participants	19	14	3	25		61
Mid/Jr. High & High School	Events	4	1	1			6
	Hours	8	7	1.5			16.5
	# Participants	15	10	4			29
High School	Events	3			5		8
	Hours	4.5			18.5		23
	# Participants	11			105		116
Other Mixed Levels	Events	1		19	5	1	26
	Hours	7		40.75	25	7	79.75
	# Participants	31		218	119	16	384
Total	Events	36	12	27	17	1	93
	Hours	71	50	72.75	56.5	7	257.25
	# Participants	324	201	371	345	16	1257

Table 3: Multiple Session Activities

		Math	Science	Technology	Integrated M/S/T	Other	Total
Pre-K	Events						
	Hours						
	# Participants						
Elementary	Events		7				7
	Hours		28				28
	# Participants		94				94
Elementary & Mid/Jr. High	Events						
	Hours						
	# Participants						
Mid/Jr. High	Events						
	Hours						
	# Participants						
Mid/Jr. High & High School	Events						
	Hours						
	# Participants						
High School	Events						
	Hours						
	# Participants						
Other Mixed Levels	Events		6				6
	Hours		18				18
	# Participants		123				123
Total	Events		13				13
	Hours		46				46
	# Participants		217				217

Professional Development was an essential component of each of the following Center programs: Lapeer County Agriscience and Natural Resources Program; Mathematics Assessment Project; Elementary Science Curriculum Support Project; Problem Based Learning with Technology (PBL); Help On Time for Technology Program; Teachers Teaching with Technology (T³); Enrichment/Accelerated Programs; Project Leader (Building a Presence for Science); Distance Learning, and Collaborative Projects; Materials for Loan; and Secondary Math/Science/Technology - Problem-Based Learning Academies.

Single-session activities included:

- | | |
|--|--|
| Uncovering & Addressing Science Misconceptions | PBL I Training (PBL and Technology) |
| TestWiz Training | 3 rd Grade Life Cycles of Animals Kit Orientation |
| Technology Leaders Training | Renewable Energy - Concepts, Sources, Strategies |
| Unit Kit Materials “Make and Take” Session | Mathematics Problem Solving Program |
| Math MEAP 2002 Preparation | MEAP Data Analysis |
| Science Benchmarks Review | CBL Workshop |
| Creating a Web Presence for the Classroom | Using the Teaching and Learning Standards |
| One Computer Classroom | Creating Virtual Field Trips/Museum Tours |
| Inspiration in the Science and Math Classroom | Summer Geometry Workshop-Park City Math Institute |
| Microsoft Office Classroom Applications | Inquiry Based Investigations in Middle School Science |
| Finding and Using Data for Schools | MI-CliMB for Administrators |
| MI-CliMB for Teachers (in local buildings) | Story Enhancing your Science Lessons |

Multiple-session activities included:

Project Leader Monthly Meetings
Elementary Science Teacher Academy

Monthly PBL Project Workshops
Agriscience Program Lab and Extension Visits

Evidence

Based on the responses to introductory workshops and request for replacement of consumable items, most elementary teachers are using the science kits and hands-on lessons provided through the Elementary Science Curriculum Support Project.

Teachers in greater numbers are demonstrating higher levels of technology skills and integration of technology into their lessons. Principals and curriculum directors report that teachers who attend Center professional development are implementing best practice instruction that is aligned to the state and national standards.

After failing to generate enough participants the past few years, we were able to assist with advertising and registrations to host the Park City Math Institute's Summer Geometry Workshop at the Center.

Some of our most important evidence is gleaned from the anecdotal feedback we receive. Local Principals and Curriculum Directors have reported teachers implementing many of the skills learned in Professional Development Sessions hosted by the Center over the past year. After the distribution of the Math Problem Solving materials, many schools were not only using the 4-step method in Math, but in other curriculum areas as well. Some schools were even doing building-wide problem of the day questions to be solved using the 4-step method. After data analysis training at Project Leader meetings, some teachers have gone back and initiated a review of the scope and sequence of their science courses using curriculum mapping, MI-CliMB, and the SVSU MASER website. Many of the teachers who worked as session facilitators at our Space Camp have requested materials to do these activities in their own classrooms already this fall. The science teachers that worked on writing quality assessment items for some of our Elementary Curriculum Support Unit/Kits reported going back to their school and pulling out tests they were about to give and rewriting them applying what they learned in the writing process.

Student Services

Focus of Student Services for 2001-2002

- ❖ Maintain high levels of involvement in existing programs that serve students.
- ❖ Increase the number of accelerated/enrichment programs for students to develop interest and talent in mathematics, science and technology.
- ❖ Develop and support Mini-grants for after school clubs and teams.
- ❖ Develop and implement a Secondary Math/Science/Technology Problem-Based Learning Academy at each high school.

Student services developed in conjunction with quality professional development can improve and enhance mathematics and science education. In Lapeer County, enrichment programs are developed and implemented to have a positive effect on instruction in local district classrooms. Most student programs have a professional development component, include a connection to classroom opportunities, or provide materials for loan to teachers for use in their classrooms. Students who participate in Lapeer County Math/Science Center enrichment activities have the opportunity to explore new concepts, develop process skills, cooperate on group tasks, and discuss their findings.

A summary of student services is displayed in Table 4.

Table 4: Student Services Activities

		Math	Science	Technology	Integrated M/S/T	Other	Total
Pre-K	Events						
	Hours						
	# Participants						
Elementary	Events		447				447
	Hours		1148.3				1148.3
	# Participants		11153				11153
Elementary & Mid/Jr. High	Events		1	1	9		11
	Hours		13	15	72.5		100.5
	# Participants		18	7	751		776
Mid/Jr. High	Events		5	1	1		7
	Hours		56.5	6.75	15		78.25
	# Participants		72	42	5		119
Mid/Jr. High & High School	Events						
	Hours						
	# Participants						
High School	Events	1	3				4
	Hours	5	4.5				9.5
	# Participants	64	23				87
Other mixed levels	Events				1		1
	Hours				4.25		4.25
	# Participants				577		577
Total	Events	1	456	2	11		470
	Hours	5	1222.3	21.75	91.75		1340.8
	# Participants	64	11266	49	1333		12712

*Students may have participated in more than one event. This number represents the total number enrolled in the 470 events.

Activities and Accomplishments:

Outdoor Ecology Week-Long Camps, Summer 2002

Outdoor Ecology Weekend Camps, Fall 2001

Fifteenth Annual Mathematics and Science Festival, November 17, 2001

Math/Science Conference for 6th – 8th Grade Girls, December 6, 2001

High School Mathematics Competition, March 5, 2002

Academic Olympiad, May 4, 2002

Life of a River Outdoor Education Camp, Summer, 2002

Agriscience and Natural Resources Program Lab Visits and Extension Visits, three per year for each 4th, 5th, and 6th grade classroom in Lapeer County public and parochial schools

Robolab Team Challenge and Obstacle Course Programs, Winter and Spring 2002

Amusement Park Physics-Michigan’s Adventure, Spring 2002

Support for Attica Elementary and Mayfield Elementary Great Lakes Ecology on the Appledore Space Camp (2)

Development/Implementation of MST-PBL Academies at local high schools

Support for the “Eyes on the Sky Astronomy Club”

Solving Mathematics in Life Experience (SMILE) program

Evidence:

High interest and participation levels in existing enrichment programs have been maintained.

North Branch and Lapeer East implemented MST-PBL Academies in 2001-02, and each of the other high schools developed and piloted activities prior to implementation this fall.

Teachers reported that over the course of the test administrations in the SMILE program student problem solving performance increased.

One of the student groups at the Amusement Park Physics event received an honorable mention for their performance. Many of these students have already requested information about attending again in 2003. One local district has offered the program as an alternate Spring Trip event for their students.

Space Camp had over 200 student participants from grades 2 through 10 with still another 40 students on waiting lists that we were unable to accommodate this past summer. Local businesses supported the program with donations of materials for the hands-on projects, more than 40 parents volunteered their time to work at Space Camp, and 7 teachers from Lapeer County schools implemented various math and science activities that were related to space. The featured attraction for each week of camp was the "Build a Shuttle" program conducted by representatives from the U.S. Space and Rocket Center in Huntsville, Alabama.

Curriculum Support

Focus of Curriculum Support for 2001-2002

- ❖ Integrate technology into the curriculum as a support for learning/instruction.
- ❖ Develop an articulated, coordinated K-12 curriculum with appropriate instructional strategies.
- ❖ Align curriculum with the Michigan Curriculum Framework and MEAP Tests.
- ❖ Identify, develop, and distribute additional elementary science unit/kits.

Activities and Accomplishments:

The support of local teachers in developing and implementing quality curriculum is a foundational component of all Lapeer County Math/Science Center activities (Professional Development, Student Enrichment, Consulting, Regional and Statewide Leadership). Some examples of curriculum support offered by our center follow.

Help On Time for Technology staff provided support for the integration of technology into curriculum.

A workshop by Mark Jeness from SAMPI on Observing Math and Science Lessons was conducted for teachers and administrators from Lapeer County and surrounding areas. Lapeer County Math/Science Center staff attended this training as well. This helped in understanding the components of Inquiry Based instruction and how to recognize it in a lesson.

Agriscience curriculum ideas were provided to teachers in pre and post visit packets three times during the year. Identification of Science Benchmarks covered through the Agriscience Program was completed. A review of the curriculum, activities, benchmark alignment, and overall effectiveness of the program was completed. This data is currently driving a revision and improvement of the program.

Lapeer County Math/Science Center took a team of local educators to the MI-CliMB training of trainers at the SVSU Regional Math/Science Center. Center staff also assisted (and are currently assisting) in the training and distribution of MI-CliMB to all buildings in Lapeer County.

The Project Leader Program offers monthly workshops for Building Science Leaders. The content of these workshops focuses on curriculum and instructional issues, including alignment the MCF, hands-on science, and inquiry-based teaching, MEAP testing, and assessment. This program is being rolled into the Building a Presence for Science initiative.

Lapeer County Math/Science Center supported the development of integrated curriculum to be implemented in Secondary Math/Science/Technology Academies during the 2001-02 and 2002-03 school years.

A Life Cycle of Animals kit (based on the STC Life Cycle of the Butterfly Unit) was purchased and distributed for use in all third grade classrooms in Lapeer County. A revision of the Simple Machines Unit to

address more Force and Motion benchmarks was completed and distribution is scheduled for October, 2002. A team of teachers began the process of assembling a set of benchmark driven, hands-on activities to support the teaching of Animal Adaptations and Interactions. A kit of materials to support these activities will be assembled and distributed over the next school year.

During the fall of 2001, we offered an Elementary Science Teacher Academy to help teachers utilize the Unit/kits that the Lapeer County Math/Science Center has developed and distributed over the past decade. This offered many teachers the opportunity to learn tips and techniques from each other in addition to learning about implementing the kit activities. Many of the teachers attending this were newer to the County and have participated in other Center activities over the course of the year since this was offered.

A team of Math teachers gathered in the spring of 2002 to write problems for a 3rd grade Problem Solving manual to enhance the 4th, 8th, and 11th grade projects distributed in the fall of 2001. These will be distributed during this coming school year.

A team of Science teachers was recruited, trained, and charged with writing quality multiple choice and constructed response assessment items for one of the Unit/kits that they teach. These assessment items are being assembled for training and distribution during the coming school year.

Evidence:

Each district in Lapeer County has received assistance in the focus areas identified above. District representatives on the Lapeer County School Development Resource Team have confirmed the progress of district and individual teacher progress toward implementation of aligned curriculum, integration of technology, and use of inquiry-based learning.

Community Involvement

Focus of Community Involvement for 2001-2002

- ❖ Continue involvement of parents, volunteers, and agencies from the community in student programs offered by the Center.
- ❖ Collaborate with the Lapeer County Career Preparation System and Michigan Works to offer Summer Camp opportunities in Math, Science, and Technology for students.
- ❖ Acquire direct and in-kind human and financial resources to support center programs.
- ❖ Continue collaboration with GTTC and Lapeer County Technology Coalition.

Activities and Accomplishments:

The Center maintained high levels of involvement from the community in all student enrichment/accelerated programs. The Agriscience Program alone had over 1000 parent volunteers who assisted with the lab and extension visits. Other agencies who assisted with programs include: Michigan State Police Crime Lab, Detroit Edison Foundation, ZONTA, AAUW, Soil and Water Conservation District, Seven Ponds, Imlay City Veterinary Clinic, Lapeer Dupont Airport, and Lapeer County Recycling Staff. Some student events have components that are open to the public. Consequently, siblings and grandparents are included in others who are aware of Center activities.

Through collaboration with the Lapeer County Career Preparation System and Michigan Works, we offered Summer Camp opportunities in Math, Science, and Technology for students. These included our Space Camp, Summer Ecology Camp, and Life of a River.

Additional funds from individuals and agencies and foundations from the community were acquired to support Center programs. Donations came from the Detroit Edison Foundation, ZONTA, AAUW, and Mrs. Bob Myers. Other state grant sources provided funding for basic services support for local school districts.

Lapeer County ISD and the Math/Science Center continued to participate in Greater Thumb Telecommunications Consortium, Lapeer County Technology Coalition, and the newly formed East Central Michigan Education Consortium (ECMEC).

Evidence:

Programs and services for students and teachers are greater in quantity and quality because of the involvement and contributions from individuals and agencies from the greater Lapeer community.

Resource Clearinghouse

- Focus of Resource Clearinghouse for 2001-2002**
- ❖ Maintain an Internet presence to support mathematics and science education and inform the public and teachers about the Center.
 - ❖ Provide support for the development of facilities and the purchase of equipment and materials to promote hands-on, inquiry-based learning in Lapeer County classrooms.
 - ❖ Disseminate information and provide access to educational programs, organizations, and resources
 - ❖ Coordinate and leverage available human and financial resources to support mathematics and science education.

Activities and Accomplishments:

The Lapeer County Math/Science Center website can be found at <http://schools.lapeer.org/isd/ciss/mathsci/>

The Center set in motion a process to develop facilities and purchase equipment for a secondary Math/Science/Technology - Problem-Based Learning Academy in each local district high school.

Additional elementary science unit/kits were developed and distributed to each elementary school in the county. Existing kits were inventoried and restocked with consumable items necessary for effective use at no cost to the local schools.

Supplies, materials, and equipment were provided to support the Agriscience and Natural Resources Program. Items included, but were not limited to, owl pellets for all sixth grades, bottles and live critters for the sixth grade ecosystem investigation, hydroponics sets and seeds, worm bins for all fourth grades, bottles and materials for the fourth grade compost column investigation, pots, soil, and seeds for plant investigations in fourth and fifth grades, soil test supplies, water test supplies, and various materials for the lab and extension visits.

A classroom set of 30 Handspring Visor handheld computers were purchased with a combination of Math/Science Center and Career Prep funds for use in High School Math Classes.

Additional PBL equipment and software was purchased to support the teachers in the implementation of problem-based learning in elementary and middle school classrooms. Other Web resources were provided to teachers in the monthly workshops.

The Project Leader Program supports the dissemination of information and resources through Building Science Teacher Leaders to support the improvement of science instruction in Lapeer County Schools.

A variety of supplies, materials, and equipment are available for loan from the Center: laptop computers, CEPUP Kits, Computer simulations, digital cameras, light box and optics sets, Lego sets, Pneumatics, Robolab sets, eLab sets, Great Roller Coaster sets, microscopes, video camera, video microscope system, and a digital projector. In September, the Lapeer County Math/Science Center purchased a 16' StarLab portable planetarium to be used by our local schools to support Earth and Space Science Instruction.

The center serves as a dissemination point for several organizations, including MSTA, MCTM, MDSTA, the Flint River Watershed Coalition, and the Lapeer County Soil and Water Conservation District.

The center coordinates and leverages human and financial resources to support mathematics and science education: the Detroit Edison Foundation, Career Prep, Tech Prep, Tri-county School Improvement Funds, Eisenhower Professional Development Program, and individual and community sponsorships of local events and activities.

Evidence:

The Center maintains a file of available resources and materials for loan. Records are kept of materials and supplies purchased for or loaned to teachers for use in their classrooms.

Personnel, Facilities, Funding

Personnel:

All staff positions of the Lapeer County Math/Science Center are filled with highly qualified, energetic individuals who are shaping the direction of mathematics and science education in Lapeer County. This group of educational leaders is charged with working closely with local district teachers and committees to meet the needs identified in the areas of data analysis, curriculum alignment/development, instructional strategies, assessment, resource support, and technology integration. Local teachers and administrators view the Lapeer County Math/Science Center as a prime source for information about regional, statewide, and national initiatives as well as school improvement ideas.

At the beginning of August, our ANR Extension Visit Teacher accepted a position as a Naturalist with another organization and resigned his position. We are currently in the process of redesigning the duties for this position to more accurately meet the needs of our local districts and hope to fill this retooled position in the near future. He is included on this table as he did provide services to Lapeer County Schools all throughout the 2001-2002 school year.

Table 5: Center Personnel

Title	M/F	Ethnicity	FTE at Center	Degree	Area of Expertise*	Years Teaching	Years at Center
Director	M	Caucasian	.75	MAT	M, S, T, O	32	12
Science Coordinator	M	Caucasian	1.0	MS	S, M, T	7	1.5
Mathematics Coordinator	F	Caucasian	1.0	MA	M, T	11	1
Agriscience and Natural Resources Program Instructor	F	Caucasian	.75	BS	S	33	4
ANR Extension Visit Teacher	M	Caucasian	.50	BS	S	25	5
Instructional Technology Coordinator	F	Caucasian	.25	MA	T	5	2
ANR Secretary	F	Caucasian	1.0	BS	S	N/A	4
Secretary	F	Caucasian	1.0	BS	O (Data Collection)	N/A	5
Secretary	F	Caucasian	.75		O (Secretarial Services)	N/A	5

Facilities:

The Lapeer County Math/Science Center offers professional development activities and student enrichment programs at the Education and Technology Center, local school district sites, and at various sites throughout the county. As of August 9, 2001, the Center is located at the Lapeer County Education and Technology Center, 690 Lake Pleasant Road, Attica, Michigan. Facilities include a state-of-the-art science lab, a computer-training lab, a conference room, six offices, several classrooms (including a distance learning classroom) that can be checked out for periodic use, and storage space for resource clearinghouse materials. The Center supports many PBL classrooms throughout the county and will be supporting MST-PBL Academies in each high school by August of 2002.

Home Base facilities used regularly:

Offices (6)
 Science Lab (1)
 Conference Room (1)
 Computer Training Lab (1)
 Storage Space (2)
 Work/Prep Rooms (2)

Other facilities used regularly:

Multipurpose classrooms at LEAs (6)
 Camp LAEL
 Lapeer Community Schools Skinner Lake Camp

Major Equipment

Owned by the Lapeer County Math/Science Center and its sponsoring organization: 45 computers, 2 digital projectors, 8 TV/monitors, three VCRs, 12 laboratory microscopes, 4 sets of professional water testing equipment, 2 laser disc players, and seven video cameras for microscopes. The center has developed over 200 kits for elementary science instruction and more are being developed during the 2001-02 school year. We also maintain and supply Lego kits, Robolab kits, eLab kits, CBLs and probes, Great Roller Coaster kits, and other equipment to teachers through the materials loan program. In September 2002, the Lapeer County Math/Science Center purchased a StarLab portable planetarium to be used by our local schools.

Funding:

Through Center leadership, collaboration with local school districts, use of other grant resources, and in-kind support the total Lapeer County Math/Science Center revenue was over four hundred eighty-eight thousand dollars. This number reflects the on-going support from local districts (through payment for services and programs and salary support), individuals and organizations from the community (contributions and unrestricted grants), our ISD through in-kind support (facilities and staff support), and other grant sources. Table 6 outlines these financial resources available for 2001-2002.

Table 6: Financial Information

Funding Source	Amount **
State Grant	\$ 236,226
Eisenhower Grants	\$ 11,225
Pupil Allocation for Accelerated Programs	\$ 0
Payments for programs and services (Registration Fees and Local District contribution for the ANR Program	\$ 63,926.50
Contributions and Unrestricted Grants –	\$ 25,000
Restricted Grants and Contracts	\$ 52,000
Other (Please describe.)Local district payment for 50% of director's salary	\$ 59857
SUBTOTAL (Should equal Total Operating Budget)	\$ 448,234.50
In-Kind Support (Please list categories of support and estimated value on the back of this sheet.)	\$ 40,000
Other Funds supporting Center programming not in operating budget	\$ 250
TOTAL AVAILABLE RESOURCES for 2001-2002	\$ 488,484.50

Summary

The Lapeer County Math/Science Center has made great progress during the 2001-02 school year. As this was our first year as a fully funded center, we were able to begin a number of projects identified in our strategic plan as well as identifying new and emerging areas for expanding our efforts.

Our focus has been on the local classroom teachers as much as possible, leading to a greater number of teachers participating in shorter, focused, just in time professional development opportunities.

The implementation of MST-PBL Academies began in two local high schools during this year while all other districts planned and piloted activities and materials for implementation this coming year. Center staff worked closely in support of these teachers as they each designed distinct programs based on their school's individual needs.

Challenges for the 2002-2003 school year include the following:

- Facilitate data-driven curriculum development in mathematics and science at the district and building level
- Maintain and revitalize professional development components of existing programs, which serve specific groups of teachers
- Disseminate resources produced through statewide curriculum initiatives to support local district school improvement goals

- Continue efforts to build an effective teacher leader programs through the Building a Presence for Science in Michigan project and the Michigan Mathematics Leadership Academy
- Utilize the results from the ten-year review of the Agriscience and Natural Resources Program to redesign our program delivery, benchmark alignment, and scope and sequence
- Support the implementation and continual improvement of all six MST-PBL Academies that have been designed to serve specific populations of students at local district high schools
- Build on existing capacity for providing and utilizing distance learning technology
- Expand the Math Problem Solving project to more grades
- Encourage and model contextual uses for MI-CliMB and other curriculum development tools
- Increase not just the quantity but also the impact on Student Learning of our professional development offerings
- Determine future directions for student offerings in Math, Science, and Technology
- Develop a model for effective use of StarLab planetarium by Lapeer County teachers