



## Technology Plan 2006-2009

### Technology Plan Committee Members (Alphabetical Order):

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Fran Darling	Paula Diedrich
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Jodi Ryoti	Jan Sabin
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February 10, 2006

**Cover Page – SECTION 1**

<b>Applicant</b>	Legal Name of Applicant	District Code / School Code	
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	Address		
	1201 West Fair Avenue		
	City	Zip Code	County
	Marquette	49855	Marquette
Telephone	Fax		
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Superintendent / PSA Director / Private School Official	Intermediate School District		
Jon Hartwig	MARESA		
Technology Plan Start Date	Technology Plan End Date		
July 1, 2006	June 30, 2009		

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**URL of the District Educational Technology Plan:** [www.mapsnet.org](http://www.mapsnet.org)

## **Introductory Material - Section 2**

### **MAPS Mission**

#### **Mission Statement**

*"The staff of the Marquette Area Public Schools believes that ALL students can learn and achieve mastery of basic skills. We accept responsibility, in collaboration with the home and community, to teach ALL students so that they can attain their maximum educational potential and become responsible, contributing members of society." [www.mapsnet.org](http://www.mapsnet.org)*

#### **Introduction: Demographics**

Marquette Area Public Schools (School code 52170) is located in Marquette, MI on Lake Superior covering about 128 square miles within the district boundaries.

Marquette County reflects a moderate rate (11.1-24.8%) of childhood poverty. However, household income is about 20% less than the average across Michigan with a median household income of \$35,584.

There are four K-3 elementary schools, one intermediate 4-5 school, one middle school and one high school. This is a reduction of two elementary school buildings and consolidation of two middle school buildings since the submission of the last Technology Plan.

MAPS enrollment for 2005-06 year is 3474 students and continues to drop annually. At this time, about 20% of students qualify for free and reduced lunch and this data has been holding steady at this level. MAPS employs 204 teachers.

## **Section 3: Vision and Goals**

### **MAPS District Vision & Maps Technology Vision**

The Vision statements and Goal/Strategies below provide a framework for all teachers to integrate technology skills and knowledge into the daily content of the classroom.

MAPS vision: "We believe that our purpose is to educate ALL students to high levels of academic performance, while fostering positive growth in social/emotional behaviors and attitudes." [www.mapsnet.org](http://www.mapsnet.org)

Technology Vision– "MAPS will provide a supportive and dynamic learning environment that ensures all students have the appropriate opportunities to develop the technology skills necessary to be successful in their future studies, the increasingly technology intensive workplace, and their personal lives. This environment will be utilized to benefit the entire Marquette Community." Found on *MAPS Technology Curriculum Guide CD*

### **INTEGRATION GOALS**

**1. Technology Integration: To integrate technology into the K-12 curriculum.**

#### **Objectives/Strategies**

*Update K-12 Technology Curriculum.*

- *Develop and implement a plan to integrate the Technology curriculum into the full curriculum for use as a tool in learning.*
- *Provide information retrieval and resources in the K-12 media program.*
- *Administer the district, school and classroom using technology.*

**2. Staff Development: To provide training for staff to acquire skills and knowledge in integrating technology into the school environment.**

**Objectives/ Strategies**

- *Develop a plan to acquire technology skills.*
- *Utilize acquired skills as teaching tools.*
- *Utilize acquired skills in the staff's administrative tasks.*
- *Integrate technology curriculum into the individual discipline curriculum.*

**3. Resources: To provide the resources necessary to insure the successful implementation of the Technology Plan.**

**Objectives/ Strategies**

- *Provide staff necessary to support the technology.*
- *Provide necessary space or provide alternatives.*
- *Purchase equipment and materials to meet determined curriculum and administrative needs.*
- *Expand and update the infrastructure to a full voice-data-video network.*
- *Research and assess new technology, implementing those that are appropriate.*

**4. Community: To provide the community with the benefits of technology.**

**Objectives/ Strategies**

- *Provide community activities involving technology.*
- *Develop partnerships.*

**5. Funding: To provide appropriate funding to accomplish the goals.**

**Objectives/ Strategies**

- *Provide district funding.*
- *Pursue grants.*
- *Develop a funding and acquisition process through the Technology Director and the Technology Committee.*

**6. Evaluation: To evaluate the progress of the implementation of the Technology Plan.**

**Objectives/ Strategies**

- *Provide ongoing needs assessment and annual evaluation to ensure continued relevance of the district's technology mission and to consider new technologies.*
- *Determine the progress of students meeting the Technology Benchmarks.*
- *Evaluate the progress of staff in becoming proficient in the usage of technology.*

**Relationship of goals to long-term vision**

Technology goals fulfill the support and learning environment identified in the technology vision. They provide a framework for teachers to integrate technology skills and knowledge into the daily world of the classroom content. They offer students a world view of global knowledge and how to tap into it for personal growth and cultural appreciation.

**Describe how goals address objectives of School Improvement Plan**

**A. Goals of Student Improvement Plan**

- 1) The primary role of our educational system is to create a dynamic environment for the purpose of educating a diverse community of learners. Accordingly, the District accepts the responsibility of offering programs and providing opportunities that maximize learning experiences for each student.
- 2) The primary role of the faculty, administration, staff, parents and Board is to fulfill the District's mission and goals by implementing, monitoring and evaluating curriculum and instruction that are most effective in promoting student achievement. All students are capable of achieving mastery of essential skills through a systematic instructional process that recognizes all students learn at different rates.
- 3) Using the Michigan Curriculum Framework as a guide, the district will use continuous school improvement to align all district initiatives for the purpose of increasing student achievement; build a curriculum based on rigorous content standards and benchmarks; use student achievement data to make decisions about continuous supported teaching and learning standards into daily instructional practice.
- 4) The primary evidence for determining the effectiveness in a school is by monitoring and evaluating student outcomes. The outcomes will be observable and measurable to assure students, parents, teachers, administrators, and community that students are mastering essential skills.
- 5) The effective school system is successful in teaching all students the essential skills they need to know. The focus of each effective school is on quality and equality. The outcome indicators selected to demonstrate student achievement will reflect with accuracy the curriculum being taught. The outcome results will be analyzed to be certain that no major subset of the student population is performing below expectations.

#### B. Relationship to Technology

Emphasis on mastery of essential skills is enhanced and supported by good technology integration goals. The purpose of the technology strategies is to increase student knowledge and skills in all curriculum areas through incorporation of technology resources.

### **I. Curriculum Section 4: Curriculum Integration**

#### **Alignment to State & National Technology Standards**

MAPS district goals are aligned to State & National standards. Academic achievement will be improved through adoption of these standards and benchmarks as the student technology goals. These goals are designed to meet the demands of the 21<sup>st</sup> Century information access and job skills as outlined by National ISTE and State of Michigan standards.

These are located in the *MAPS Technology Curriculum Guide* CD as Appendix I and also online at:

<http://www.mapsnet.org/Pages/DistrictK-12Curriculum/Chapter%20II/II%20CONTENTS.htm>

### **Integration Strategies for student improvement in academic achievement and tech literacy**

From the Integration Goals in Section 3 of this plan, Staff Development will be used to introduce strategies that improve student academic achievement and tech literacy. The philosophical overview found in the learning strategies noted in the article: “*Building Better Instruction*” (Learning and Leading, (2004). V 31 (5) Pp 6-11. International Society of Technology Education. ISTE) is a focus for technology professional development instruction, resources and materials. Here nine basic research-proven classroom instructional strategies, such as compare and contrast; summarizing; cooperative learning; nonlinguistic representation; advance organizers; generating and testing hypothesis; and providing feedback, are supported by technology.

These Strategies are further iterated in the “Beliefs” statement for MAPS Technology Curriculum Benchmarks:

“The technology committee believes that the classroom and special area teachers must be involved in the development of technology integrated lessons. Through collaborative efforts with the district’s Supervisor of Technology, lessons will be developed for implementation. A database of lessons and activity ideas will be available on the Technology Curriculum CD, district’s network and technology web site.

Teachers are encouraged to utilize technology unilaterally across the curriculum in presentation methodology. They are encouraged to imbed technology benchmarks in their lessons as classroom teachers, computer lab teacher, and special area teachers.”

### **Promotion of curricula & teaching strategies**

In line with this philosophy, many specific strategies are gathered for teachers into our *MAPS Technology Curriculum Guide* CD. These CDs were copied and distributed to all district teachers during various group training sessions last year. Technology for student learning improvement The Resources Section V, offers 70 instructional files, many of which have Internet resource links for classroom integrating strategies. These range from specific grade-level activities to teacher planning tools and basic software instruction.

Other models and programs currently used in sessions and offered throughout the year:

1. INTEL Teach to the Future- (K-12 teachers); approximately 35 teachers have graduated from this program since 2003.
2. Digital Media workshops (K-12 teachers and aides) that support student story development and use of electronic media. Examples of this media include the use of digital still and video cameras, scanning, audio, Microsoft Movie Maker and Internet free share music.
3. Visual Organizers workshops that focus on research and use within the classroom across grade levels (K-12 teachers and aides) using software and resources that include: Timeliner 5.1, Visio, Inspiration & Kidspiration and Internet.

4. Mapping workshops (3<sup>rd</sup> grades – 12) focus on geography and social studies, using software & resources that include: Map Makers' Tool Kit & Map Point software and Internet.
5. Video-on Demand with *unitedstreaming*, includes program features of *unitedstreaming*, linking videos to specific curriculum benchmarks, and using in PowerPoint and Movie Maker presentation programs
6. Primary Source Social Studies for Michigan History, includes hands-on at Michigan Iron Mining Museum, visit to NMU Central UP Archives and internet resources and Michigan history web Pathfinder at:  
[http://www.mapsnet.org/pages/fdarling/index\\_files/page0002.htm](http://www.mapsnet.org/pages/fdarling/index_files/page0002.htm)

## I. Curriculum Section 5: Student Achievement

**Specific samples of technology integration from the MAPS Technology Curriculum, MAPS Core Curriculums, and MAPS Literacy program.**

**1. Technology Curriculum** - For example, in the High School Technology Curriculum technology resources are suggested for each Technology Standards in the specific Content area. These resource are located online at:  
<http://www.mapsnet.org/Pages/DistrictK-12Curriculum/Chapter%20II/II%20CONTENTS.htm>

High School Technology Benchmarks: English			
Standard 2: Social, Ethical & Human Issues			
	Students understand the ethical, cultural & societal issues related to technology.	Students practice responsible use of technology systems, information & software.	Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits & productivity.
<b>Word Processing – MS Office 2003</b>			
Compose well-written, visually pleasing documents using basic word processing skills.	X	X	X
Create computer-generated with title page, outline, text, works cited and parenthetical referencing:			
Incorporate the following into their			X

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documents			
-spacing & indenting			
- variety of sizes and fonts			
-centering, setting margins, tabs, tab stops			
-spell check & thesaurus			
-pagination			
-documentation using MLA or APA guidelines	X	X	
<b>Multimedia – PowerPoint &amp; Movie Maker</b>			
To use multimedia presentations (i.e., PowerPoint) with graphics, text and sound to communicate, illustrate and illuminate their ideas.	X	X	
To create a visual representation of a timeline, using tools such as TimeLiner, PowerPoint & Microsoft Word or Excel.	X	X	
<b>Databases – Excel &amp; Access</b>			
Analyze and create database documents for research and presentation of information.	X		
<b>Telecommunications</b>			
Use the Internet to research and share information	X		

### Suggested Activities and Resources

#### Word processing

- Write stories and essays.
- Write arguments for an issue you are studying.
- Research a famous person and write a news article.
- Write fictional autobiographies.
- Create a poster related to the topic you're studying.
- Create a newspaper from the time period you are studying.
- Draw a map of an area or place
- Make invitations encouraging people to join in a protest or historical event.
- Write articles and feature stories to make a newspaper.
- Create personal resumes.

#### Multimedia:

- Students create a collection of literature.
- Create a multimedia and/or video presentation on current events and issues.
- Report information researched.
- Create stories or reports and publish writing on the World Wide Web.
- Create a multimedia book report.
- Have students create a video presenting persuasive information.
- Students present reports using presentation software.
- Have students create a branching or choose your own ending story.
- Use video and TV commercials to analyze persuasion and the difference between fact and opinion. Have students create their own commercial with video.
- Have students select literature that best depicts conditions of an era and defend their choice in a multimedia presentation.

**Telecommunications:**

Research.  
Collaborate in online projects.  
Have students write their resumes and publish on the Internet.  
Have students use OCLC First Search as a research tool.

**Software:**

Use *Microsoft Office* from [www.microsoft.com](http://www.microsoft.com)  
Use *TimeLiner* from Tom Snyder Productions

**2. MAPS district Core Curriculum** -- From the other perspective, MAPS Content Area Curriculum Standards and Benchmarks have Technology Resources and Activities incorporated directly. These examples are noted:

Grade 2 SS – Strand V: Inquiry, Standard 2, Benchmark 4: Suggested resources – Use video taping for investigating results.

Grade 2 SS – Strand I: Historical Perspective, Standard 2 & Benchmark 1: Suggested resources – *unitedstreaming* video: *Rosa Parks, Old Henry, Criticism and Respect, Respect for Property, Respect for Ideas, Yo Yes.*

Grade 2 SS – Strand V: Inquiry, Standard 2, Benchmark 4: Suggested resources – Use video taping for investigating results.

Grade 4 SS – Strands I - IV:, All Standards, Suggested resources – Use MICLiMB resources at: <http://www.miclimb.net> ;

Grade 4 SS – Strand IV: Economic Perspective, Standard 1, Benchmark 4: Additional suggested resources –; Use video: *Building of Mackinac Bridge*;

Grade 4 SS – Strand I: Geographical Perspective, Standard 1, Benchmark1-4: Suggested resources – Use Ellis Island CD set and project;

Grade 4 SS – Strand V: Inquiry, Standard 1, Benchmark1 Suggested Assessment – Locate information using electronic technologies and other sources.

Grade 5 SS – Strands I - IV:, All Standards, Suggested resources – Use MICLiMB resources at: <http://www.miclimb.net> ;

Grade 5 SS – Strand V: Inquiry, Standard 1, Benchmark1.

Suggested Resources: <http://www.webquest.com>

Suggested Assessment – Locate information using electronic technologies and other sources.

Grade 5 SS – Strand IV: Economic Perspective, Standard 1, 2,4, multiple Benchmarks: Suggested Resources: *unitedstreaming: Economics: the Production, Distribution, and Consumption of Goods and Services.*

Grade 5 SS – Strand II: Geographical Perspective, Standard 4 Benchmark 5 & Standard 5, Benchmark1.

Suggested Resources: Internet: MI DNR, US Coast Guard, US Fish & Wildlife; Great Lakes Water Commission, Time for Kids, National Geographic

Grade 5 SS – Strand III: Civic Perspective, Standard 3 Benchmark 4. Suggested Resources: Internet: *unitedstreaming*: *Ssssh! We're Writing the Constitution* & Standard 5, Benchmark5: *Time for Kids*

Grade 5 SS – Strand I: Historical Perspective, Standard 1, Benchmark1, &4, Suggested Resources *unitedstreaming* Videos:

*The Southern Plantation Way of Life; Making the Thirteen Colonies: The Southern Colonies, The Age of Exploration Begins, The Portuguese Explorers, Spanish Explorers of North America, Explorers Discover America; Six Revolutionary War Figures Boyhood of Martin Luther King Jr., American Heroes and Heroines: Dr. Martin Luther King, Jr.* Standard 3, Benchmark 3: *Conflict With England, The Battles of Lexington and Concord, Paul During the Revolutionary War, Why Don't You Get a Horse, Sam Adams? Seeds of Liberty: Causes of the American Revolution, The Slave Trade: Triangular Slave Routes*

Grade 2 Science: Strand III Life Science, Standard 4, Benchmark 1 Suggested Resources: *unitedstreaming*: *Prehistoric earth, Fossil Life, An Introduction*, Standard 2, Benchmark 3 & 4 Suggested Resources: *unitedstreaming*: *How the Land Changes Shape, Using Rocks to Study the Past, Clues from the Past, Excavation and Study*

Grade 2 Science: Strand V Earth Science, Standard 1,2 3, Benchmark 1 Suggested Resources: *unitedstreaming*: *Matter and its Properties; Solids, Liquids, and Gases; Water, Earth's Important Resource*; Standards 5&6 *Thee Types of Rocks, Igneous, Metamorphic, and Sedimentary; Using Rocks to Study the Pas; Conserving Natural Resources*. Standard 2, Benchmark 4: *Dinosaurs and Fossils; Regulating Air Pollution*

Grade 5 Science: Strand IV Physical Science, Standard 1, Benchmark 1 Suggested Resources: *unitedstreaming*: *Be An Inventor*, Standard 2, Benchmark 3 Suggested Resources: *unitedstreaming*: *Physical Science, Elements, Compounds and Atoms, Matter and Its Properties: Changes in Matter* Benchmark 4 & 5 Suggested Resources: *unitedstreaming*: *Hot Line: All About Electricity*, Standard 1& 2, Benchmark 1 Suggested Resources: *unitedstreaming*: *Rain or Shine, Weather Smart: Forecasting and Weather Instruments*

Grade 2 Literacy: Literature, Depth of Understanding, Ideas in Action. Standards 5, 9, & 10 Suggested Resources: *unitedstreaming*: teacher-created PowerPoints.

Grade 5 Literacy: Skills and Processes , Standards 1-3, 7, 11,12, Suggested Resources: *unitedstreaming*: *Literacy and Learning: Social Studies Grade5*, Learning Tools: Writing Prompts

Middle School: Language Arts GLECs  
Grade 7 - R.NT.07.01, 3, 4 & R.CM.07.01, 2, 3  
Clay Marble-Realistic Fiction: Cambodia *unitedstreaming* video; PowerPoint comparing US and Cambodia using Internet resources; CIA World Factbook web site

Grade 7 R.NT.07.01, 2, 3, 4 & R.CM.07.01, 2, 3, 4  
Myths and Legends: Web search Olympian Gods & Goddesses

Grade 7 R.NT.07.01, 2, 3, 4 & R.CM.07.01, 2, 3  
Memoir: Names brochure writing project: Publisher brochure; Web search meaning of name; write and publish a resume

Grade 7 -W.ST.07.01  
Personal Style Multi-genre Magazine Project  
Word processing, URL citing for information & art, Puzzlemaker, Web searching

Grade 8 - R.NT.08.01; RCM.08.01, 02; WGN. 08.03  
Holocaust research – Web-Site evaluation; Holocaust Museum and Anne Frank Web sites; Organize information with Inspiration, Use PowerPoint to visualize content.

Grade 8 - R.NT.08.01; S.Ds.08.02; RCM.08.03; WGN. 08.03; L.RP.08.06  
Animal rights research – Using MeL Databases & Facts.com & MLA Citations.  
Organize information with Inspiration

Grade 8 - R.CM.08.01; WGN. 08.01, .02  
Use TimeLiner software to facilitate Journal writing and visualize story exposition

**3. MAPS Literacy program** -- Use of Scholastic Reading Inventory testing 2-3 times a year in all grade levels (K-12) to create profiles for students reading based on student preferences and lexile scores.  
Use of *Reading Counts* reading quizzes (K-5) grades for motivation and increased reading abilities.  
Incorporation of Literacy Coaches who use data collection & assessment for all K-5 students.

**Timeline for integration** – will be included with the overview timetable section

Currently the district is looking at more teacher input through continuous and sustained work in curriculum issues. This is being facilitated through the newly established Curriculum Council and the current Professional Development proposal. The Professional Development proposal is to provide a weekly late start morning to allow for more time for team planning and small study groups in the content areas. Over the next three years groups will focus on student achievement through curriculum study and planning, data collection and technology integration. See Section 13.

**Eighth Grade Technology Literacy Certification Requirement**

MAPS Eight Grade Technology Literacy Certification Requirement assessment is based

on the course grades for English Language Arts students and Advanced Computers students, used as a gauge of overall school technology progress using the above integration of technology. For the year 2005 in the general Language Arts courses 87.8% of students received grades of C or better and the in the Advanced Computers courses 94.6% of the students received grades of C or better. This indicates that students were successful in accomplishing technology projects and activities integrated into their curricula as exemplified in Middle School Grade Level Content Expectations above.

## **I. Curriculum Section 6: Technology Delivery**

### **Use of Distance Learning Resources**

#### **A. Current resources:**

1. MAPS subscriptions for delivery of specialized Internet databased technologies:
  - Research: Facts on File.com reference for K-12
  - Courses offered: Alternative Education students taking online courses to complete needed credits
  - Resources: *unitedstreaming* Video on Demand; Reading A to Z for K-3 teacher Literacy resources
  - As new curriculum texts are purchased through the district curriculum cycle, technology resources are included. For example: Scholastic, Holt Rinehart, and Harcourt curriculum textbooks have both audio CDs and Internet content available.
  - District account to the free [www.Gaggle.net](http://www.Gaggle.net) e-mail accounts for students. These accounts can be added as teachers request them for students. They are used primarily as teaching tools in the technology classes. But they can be specifically activated to meet student needs, as in the case of one third grade boy whose father just left for Iraq. We activated a personal account for him to be able to communicate with his father throughout the school day as needed to help him through this traumatic experience.
  - Online assessments are also increasingly used by teachers through a number of resources: the text publishers; eInstruction CPS hardware located at the middle and high schools; and other Internet sources such as *Quia* and *Quiz Star*.

#### **B. Current Distance Learning activities:**

1. The Video Conferencing room in the High School has been used for teacher enrichment, such as the Plagiarism Forum 2004.
2. NMU's Distance Learning department works with teacher requests for Virtual Field Trips. NMU also provides a links to virtual tours and conferencing at: <http://www.nmu.edu/av/k-12fieldtrips.html> and resources from TWICE for such projects as *Read Across America* at: <http://www.twice.cc/read/> These can be accessed by teachers through assistance from NMU and are coordinated by the MAPS Technology office
3. A number of Middle School Science teachers participate in JASON collaborative learning
4. Video conferencing has occurred for classroom connections to remote sites: Kindergarten pen-pals to the Dollar Bay schools facilitated by NMU and MAISD, coordinated by the MAPS Technology department.
5. A High School Social Studies teacher uses SKYPE to conference peer to peer voice

service, talking to instructors and their classes in Finland and Italy. She uses a Web site called World Class Schools for Global Communities for the teacher contacts. She has also been running Distance Learning content using [www.moodle.com](http://www.moodle.com) for all students in her Psychology and Economics classes. Other High School teachers also use [www.nice.net](http://www.nice.net) for posting course materials in a content management program.

6. Promote and use Annenberg's Journey North projects that provide content, lesson planning resources, collaborative projects and Professional Development for teachers. "Journey North engages students in a global study of wildlife migration and seasonal change. K-12 students share their own field observations with classmates across North America." <http://www.learner.org/jnorth/>

7. A number of Elementary teachers are currently participating in the *e-Iditarod* online <http://surfaquarium.com/eIDITAROD> Sled Dog races. This includes e-mailing comments to mushers as students track their progress across Alaska using Internet resources and information.

8. MAPS Supervisor of Technology Integration coordinated a teacher workshop with our Intermediate school and NMU. This workshop was for teachers wanting to use a Video Conferencing unit available from NMU through their teacher training programs. The workshop provided resources and assistance for use in the classroom.

**C. Future:**

1. Section 12 in this Technology Plan will address hardware issues yet to be ironed out that impose technical & logistical barriers to our Distance Learning capabilities.

2. We are exploring separate wireless network capabilities through assistance from NMU that will allow a portable DL transmitter. Many teachers are looking forward to accessing this technology to link their classes to live remote sites that relate to their classroom content.

3. Our new MAPS web site is a Content Management System that has capabilities for Distance Learning which we are continuing to explore. Teachers can use this for class forums and other Distance opportunities for anytime access.

**I. Curriculum Section 7: Parental Communications & Community Relations**

**Delivery of the Technology Plan to the Community**

1. The current Technology Plan is posted on MAPS Web site, [www.mapsnet.org](http://www.mapsnet.org) and will continue to be posted.

2. Technology notes are delivered in the District Newsletter sent regularly and also posted on MAPS web site.

3. Technology Sessions and Classes are posted on Internet-based Meeting Room Manager Calendar.

**Effective Parent Communication with Technology**

1. All teachers have e-mail accounts that are available for communication with parents from school or home.

2. All teachers have web-creation tools, training, and storage available to them for better parent communication. Many of our teachers create and maintain their classroom sites. Bothwell Middle School has undertaken a planned posting of a web home page for every teacher. Instruction from Building Technology Coordinators and the district Supervisor of Technology Integration is ongoing and supportive in this effort.
3. The District Web site has links to all schools, board information and meeting minutes, events and other pertinent activities and information.
4. Technology Links page: [www.mapsnet.org/pages/fdarling](http://www.mapsnet.org/pages/fdarling) has information related to resources and sites for student and parent content information, as well as How To's for software programs and integration ideas.
5. The Technology Newsletter is posted on the above site.
6. The district uses Skyward's Gradebook program which provides online access to grades, assignments, attendance and other information to all parents for students in grades 6-12.
7. *unitedstreaming* and Facts on File databases offer home logins for parents to view movies assigned to students or help research topics assigned.
8. Middle and High School Libraries are part of the UPROC which has home logins for accessing all the library catalogs and resources across the UP. Links are also available from the MAPS web site at:  
<http://www.mapsnet.org/Departments/Libraries/tabid/284/Default.aspx>  
New K-5 Library software will have a home login capability as well. (See III Section 11)
9. High School Video Journalism Class school events videos are broadcast weekly over Cable Public Access.

### **Parent and Community Representation**

Parents and community members are involved in all aspects of MAPS technology. We have always had parent representation on the Technology Planning Committee. Marquette city and NMU representatives are present and provide input, as well. Involvement from parents and assistance from NMU-TV program department are seen directly in many technology programs, including Kids on the Air and other video news programs, and computer lab assistance. Other community assistance and collaboration for technology has been with NMU Archivist, Marcus Robyns and Michigan Iron Museum Education specialist, Barry James.

## **I. Curriculum Section 8: Collaboration**

### **Continuing Education and Alternative Education Collaborations**

1. Classes are offered each semester for Adult and Continuing Education. These include a number of technology offerings for the general community. They are able to use the network resources for storage and Internet exploration.
2. GED classes use the lab facilities and all have networked files and access to all computer software
3. The Alternative High School has full capabilities and lab facilities the same as

traditional High School students: Web Access, Software, networked files and folders, Internet and DL use. Photo Shop and Gaming software has recently been loaded on these stations. Students will be engaging in creation of Virtual Tours of Michigan using this software.

4. The Technology department works with Alternative Ed students and staff and GED & Adult Ed teachers for training, materials and resource information.

5. Assistive Technology Center/United Cerebral Palsy at the MARESA facility assesses technology needs for our students. MAPS Supervisor of Technology Integration attends assessments for special education students and assists teams in selecting and implementing appropriate technology products.

6. District Technology and Special Ed provides hardware and software not available from ATC for students with special needs and collaborates on installation and training needs. We will continue to provide all software and hardware updates through our regular rotation processes outlined in the hardware section below, as well as continued support for special students assistive technology needs.

7. The ATC director, Sara Menzel offers workshops in assistive software and collaborating with MAPS Supervisor of Technology Integration on uses of Microsoft Word in assistive activities. The Assistive Technology Center computer lab is available to teachers, students and parents from MAPS district to explore programs and products.

## **II. Professional Development - Section 9: Professional Development**

### **Professional Development Strategies**

**Current Strategies** – Note: almost all of these are open to any staff member at MAPS. Participants have included custodians, aides, library and other support staff, administrators, all teachers. All activities are planned and coordinated by the MAPS Supervisor for Technology Integration. Classes are taught by MAPS Supervisor for Technology Integration or other teachers in the district, local institutions, or professional trainers from administrative programs:

1) **Summer Technology Fair** – a 3-day mini technology conference for hands-on creation of classroom projects in a technology skill area, e.g. classes such as “PowerPoint in the Classroom” are taught by district teacher-experts and Supervisor of Technology.

2) **Short-term courses**- Summer and after school general technology skill e.g. Kidspiration & Inspiration, Digital Cameras

3) **Long term Classes** – offered over the summer and during the school year, e.g. INTEL Teach to the Future, *unitedstreaming* linking to curriculum and in presentation software- instituted through a Marquette Excellence in Education Grant, Primary Source Resources – Local Iron Industry Museum and Central UP Archives and Internet resources

3) **Classroom-focused Workshops**, e.g. Digital Media, Graphic Organizers, Map programs (Map Maker’s Tool Kit & Map Point) for Social Studies Geographic enhance topics-instituted through a MAPS Foundation Grant, Classroom Performance System (CPS)

4) **Weekly Technology Visits** - to each K-8 school and MSHS by appointment to assist teachers with questions, work in their classrooms with students, follow-up on previous tech information, and collaborate on projects

- 5) **One-On-One Planned Sessions** -visits planned by School Administration using a roving sub to meet with individual teachers.
- 6) **Trainer Workshops for Grade**–level teams, e.g. Scholastic Lesson Planner for K-3 teachers
- 7) **District-wide PD** for Technology
- 8) **MARESA, State and National Technology Conferences** for teachers
- 9) **Building Technology Coordinators** in each building to support teachers and staff by providing resources, support, and teach workshops and drop-in sessions for individual buildings. Coordination of a team of Building Technology Coordinators is ongoing and current through meetings with MAPS Supervisor of Technology Integration.
- 10) **Reading Club**, e.g., Al November’s *Empowering Students With Technology*
- 11) **Newly established Curriculum Council** – district-level body assembled to address global curriculum issues.
- 12) **Project TELL** – Teacher training at MAISD to take back to buildings
- 13) **Web page resources** [www.mapsnet.org/pages/fdarling](http://www.mapsnet.org/pages/fdarling) used in training sessions and remain posted for ongoing reference and the *MAPS Technology Curriculum Guide CD*.
- 14) **Classroom Intervention** directly with students to conduct technology activities with teachers and their classes by MAPS Supervisor of Technology Integration acting as “guest teacher.”
- 15) **Purchase and distribute manuals**, activity books and software for teachers appropriate to grade level libraries and teachers
- 16) **Online Grading programs** - workshops, support, assistance and coordination of training for use and upgrades.
- 17) **K-5 Student video news** programs. Modeled after MACUL award-winning “Kids on the Air” developed by MAPS Superior Hills Elementary parents and staff. It has been replicated at Graveraet Intermediate School, and on a limited basis at Vandenboom Elementary.
- 18) K-5 Library Media staff participates in *Reading Counts* as point persons and teacher support.

**Future Strategy:**

1. Consider implementing Professional Development Proposal for weekly 90 minute late student start.
2. Monthly one-on-one 50 minute planned sessions with individual/team teachers using roving subs.
3. Increase teachers’ basic competence (still an area of need) of all applicable district technology per teacher’s position. Use the ISTE checklist for teachers as a Survey on use of basic technology applications. Use results to promote and create more awareness of staff individual technology needs in order to promote more “just–in-time” delivery of technology training.
4. Provide and promote more information on new teaching methods and strategies that involve “active learning” to meet students’ needs individually and engage in more project-based learning. This will facilitate the process of teacher evolution towards more technology expertise.
5. Increase number of computers in classrooms based on teacher application of how it will be used to increase student achievement. This will be accomplished by finding ways

- of redistribution of building resources, buying back more leased computers, and/or leasing additional computers.
6. Promotion of MAPS Supervisor for Technology Integration as a “guest teacher” when the classroom teacher is not comfortable with software/technology.
  7. List of technology equipment available for loan to be distributed to all staff.
  8. Continue processes to “re-work the learning environment” with integration of networked, distance resources, and student-driven projects.
  9. Promote Information Literacy among all teachers and staff to guide users to seek, find, evaluate and use the vast amounts of information now available online in a more effective and accurate way.
  10. Continue to inform and instruct on the issues of copyright, plagiarism, and the techniques of citation of all types of sources.
  11. Continue to promote the ISTE Technology *Standards for School Administrators* (TSSA) as support for teaching and learning with technology continues to evolve in each building.
  12. K-5 Library Media staff participate in training for incorporation of new online catalog software

### **Professional Development offerings for Technology Integration**

Workshops and classes are created on-site, mostly in the Technology office and are individualized for personal and grade level/content area needs. All formal workshops are introduced through a rationale for using the technology in the classroom. These include research that supports student achievement; teacher testimonials; and other similar technology “hooks.” They are also directly linked to classroom content and activities by using such resources as MICLiMB activities search and MAPS online Core Curriculum. Michigan Teacher Network is also given as a resource for providing Internet materials linked to content standards. Presenting current research that reveals increased student achievement when using a program such as *unitedstreaming* or ISTE resource articles for concept mapping programs such as TimeLiner, or Inspiration/Kidspiration, for example, is also stressed when introducing these programs.

Workshops and classes are models promoting classroom practices: *INTEL Teach to the Future*, *unitedstreaming* Integration, Digital Media, and Primary Source Integration. These promote “active learning” and are designed to help teachers meet individual needs and engage students in project-based learning activities. Workshops on how to use hardware (data projectors, digital cameras, and TV scan converters) are presented using content-area materials and integration ideas when training on this equipment.

The philosophical overview for effective “just in time” integration and promotion of active learning strategies is supported in the following articles:

“*Building Better Instruction*” ([Learning and Leading](#), (2004). V 31 (5) Pp 6-11. International Society of Technology Education. ISTE).

*Just Use It: Rethinking Technology Training for K-12 Teachers*. Mary Burns, August, 2005. [TechLearning](#). URL:

<http://www.techlearning.com/shared/printableArticle.jhtml?articleID=165700672>

### **State and National Standards**

Use of State and National Technology Standards for Students, Teachers and administrators is shown by:

1. Including *ISTE Standards* on the MAPS Technology Curriculum CD as stated in Curriculum III, Section 4.
2. Creating a workshop for UP Administrators presenting the *Technology Standards for School Administrators* (TSSA) from ISTE co-presented by MAPS Supervisor for Technology Integration and MARESA.
3. Membership in ISTE to facilitate purchase and dissemination of standards publications.

### **Timeline for PD Implementation**

See Section 13

## **II. Professional Development Section 10: Supporting Resources**

### **MAPS Policies**

MAPS Technology policies are located in the *MAPS Technology Curriculum Guide* CD & MAPS web site:

<http://www.mapsnet.org/District/DistrictInformation/DistrictPolicies/tabid/108/Default.aspx>

### **Manuals and printed materials**

*MAPS Technology Curriculum Guide* CD, web site, Newsletters and tips, and M: District on Mapsnet internal informational shared network folders. Activity Resources and Manuals also distributed among the 7 school libraries.

### **Video on Demand**

*unitedstreaming* supported with its own server in Fall 2005; teachers can download and burn videos, and create and burn PowerPoint and Movie Maker presentations with embedded video clips. MAPS Workshops are offered to integrate this resource directly into curriculum benchmarks and create classroom resources mentioned above. Teacher narratives are also available to help promote use of this resource among teachers. The book marking feature of *unitedstreaming* allows teachers to share video selections with their school and across the district. A selection of Professional Development videos is offered in this resource.

### **District Web & Network Resources**

Informational Technology Web site: [www.mapsnet.org/pages/fdarling](http://www.mapsnet.org/pages/fdarling) including Technology Newsletters and tips; e-mail Technology instruction and How To's both individually and mass district. Instructions and resources are posted and updated on

District Network Shared Drive. Each school has shared drives to post photos and files of local school interest and information.
<b>Instructional &amp; Training Software</b>  KEY training modules for Microsoft Office and Windows – distributed to Building Technology Coordinators; <i>INTEL Teach to the Future</i> ; Software Manuals with CDs and packaging distributed to libraries and lab teachers and available in the Tech Office to borrow
<b>Online Subscription services</b>  <i>Facts on File Reference Suite</i> (6-12 grades) and <i>Facts for Learning</i> (K-6 grades) – guided reference; <i>unitedstreaming</i> Video (K-12); <i>Reading A to Z</i> (K-3).
<b>RESAs and ISDs</b>  MARESA (Marquette-Alger Regional Education Service Agency) offers many programs which teachers and the MAPS Technology Department have participated in, such as: TELL Teacher Leaders; TELL district and Administrator Technology Proposals and workshops; Administrator Class; CPS Training; Video in the Classroom; Internet for Project-Based Learning; JASON; DL coordination  DSISD ( Delta-Schoolcraft Intermediate School District) also has been a valuable technology resource for MAPS staff: TELL Teacher Institute participation for the past two years in workshops and projects. Technology Coordinated with MAPS Integration Supervisor a district-wide training for digital cameras and digital microscopes.
<b>Higher Education</b>  Partnerships with NMU Teacher Education program include: set up of NMU student wireless access in MAPS school buildings; NMU Instructors coordinating SRI student data collection program in MSHS; NMU DL coordinator; NMU Archives Summer Workshop coordinated by MAPS Integration Supervisor and NMU representation on Technology Planning Committee.  <i>INTEL Teach to the Future</i> course is currently offered twice a year through the MAPS Technology Department and is approved for two graduate credits at NMU with MAPS Supervisor of Technology as teacher of record with the university.
<b>Other resources</b>  MSHS Teachers: Pilot MSHS <i>Blackboard</i> , <i>Moodle</i> and <i>Nicenet</i> for online posting of course materials for Social Studies Psychology and Economics and Chemistry; <i>Classroom Performance System</i> hardware available to 5-12 grade schools use for student interactive quizzes and discussions; District-wide National Election participation through MAPS Internet web site; <i>SKYPE</i> internet phone service used in MSHS Social Studies classes

**III. Section 11: Infrastructure Needs/Technical Specifications, and Design**

The following is a description of the current status of hardware, software, network infrastructure, telecommunications, and other technology service:

**Network:**

All buildings are equipped with a switched Ethernet network with a minimum of 100Mbps connections. Each building is connected to the Technology Department network for Internet access and other servers.

**Servers:**

Each building has a dedicated file server for file and printer sharing. In addition, there are separate servers for services such as e-mail, webserver, and student database. We also have servers for the Skyward Administrative software and *unitedstreaming* digital video access.

**Computers:**

Almost all computers are capable of running Windows XP professional, and are configured for Internet/Intranet access. Of these computers, 600 are on a three-year lease divided into three groups.

**Software:**

MAPS participates in the Microsoft School Agreement, making the latest version of Windows XP Professional, Office Professional, Front Page, and Visio available to all computers. In addition, many stand-alone programs are installed on an as-needed

**Future acquisitions planned:**

1. Increase Wide Area network and Internet bandwidth. Review Charter service and other IP providers including increased installation of fiber.
2. Review presentation equipment coverage in schools, such as data projectors. Add library software and convert records from paper in K-5 schools. Purchase from current bids received library software vendor or on a school-by-school basis
3. By 2008 recommend additional classroom hardware 1 teacher station connected to a digital projection device. 1 student station per 10 students/ based on classroom space available. 1 student station per special needs student when required by the student IEP.

**Current and ongoing:**

To ensure the interoperability of equipment, strategies used are to require Schools and Departments such as Special Education to send technology requests for hardware and software to the Technology Office so compatible equipment can be purchased. It is also strongly encouraged that technology equipment requested by parent groups and from grants be researched, priced, and ordered by the Technology Department to ensure that is compatible with current hardware and software.

**In the Future:**

Leasing options explored in combination with buy-back purchasing.

Within the district, there are many sources of technical support that is available. These are currently in place, evaluated and upgraded as needed.

**Technology Office Supervisors:**

Director of Technology; Supervisor of Technology Integration

**Technology Office Staff:**

Helpdesk/Secretary and Network Specialist

**School-based :**

Extra-duty Building Technology Coordinators:1-3 /school

MSSH Student Technology Aides: 1/class-hour as available

**Personal support strategies include:**

1. Weekly visits to all schools (except MSSH where visits are by appointment) by Technology Personnel that includes field support for hardware or software.
2. Help Desk support is initially delivered by our Secretary who can solve the issue or escalate the problem to other staff members. More complex problems are escalated to the System administrator and Technology Director. All Technology staff have the ability to provide remote computer assistance at anytime during the day to any computer in the district.
3. Personal visits to any schools as needed by the Technology Network Administrator and Technology Director.

**Support media include:**

1. E-mail
2. Step-by-step instructions and handouts posted online, on the Shared network folders, and by attachments to e-mail.
3. Remote assistance to any networked district computer
4. Direct phone communication from 7:00 am – 4:00 daily.
5. District online Work Order system.

**School-Based support:**

1. Building Technology Coordinators are positions in each school (two positions in the Middle School and three in the High School) that are supervised and updated by the Supervisor for Technology Integration, help school staff solve technology problems and offer training on various software and hardware. Positions are limited to 5-year terms with annual performance review.
2. The High School also operates a student support group to assist teachers with immediate technology problems. They are supervised by one of the High School Building Technology Coordinators and work closely with the district Technology Department.

**III. Infrastructure, Hardware, Technical Support and Software –  
Section 12 Increase Access**

Currently all students have access within the district. Some access remotely via Internet,

such as library reference resources, staff Web Access e-mail, information posted (see above) on MAPS Web site. MAPS website is now an online course management system which supports: survey, forums and chat features for teachers, students and parents.

We propose to increase access – through increased bandwidth to the MAPS Wide Area Network, which will add capabilities for increased use of Video Conferencing. Also, introduction of online K-5 library catalogs with Web access, expansion of incorporation of student e-mail from [www.gaggle.net](http://www.gaggle.net) as needed, incorporation of Moodle online course management software.

We currently offer support with hardware, software, and training for assistive technology for students with assessed needs and their teachers and aides. We plan to increase individualized support through continued attendance by Supervisor of Technology Integration at Assistive Technology assessments provided at our regional ATC office.

#### **IV. Funding and Budget Section 13: Budget and TimeLine**

##### **Budget**

Budget amounts will remain essentially static, with available funding to be shifted to add additional hardware and software as deemed necessary and when fiscally possible. Inflationary pressures may cause shifting of amounts within the categories below.

<b>Category</b>	<b>2006-2007</b>	<b>2007-2008</b>	<b>2008-2009</b>
Computer Lease Costs (includes Lease Cost, Return/Purchase cost and PPT)	\$175,500.00	\$175,500.00	\$165,000.00
Software Annual License Fees (Varies by year due to multi-year agreements)	\$155,000.00	\$141,000.00	\$148,500.00
Maintenance & Supplies	\$42,900.00	\$42,950.00	\$43,000.00
Professional Development New/Replacement	\$15,000.00	\$15,000.00	\$15,000.00
"Hardware"	\$26,000.00	\$20,000.00	\$20,000.00
Internet Connectivity	\$100,000.00	\$100,000.00	\$100,000.00
Telephone	\$59,100.00	\$60,200.00	\$61,400.00
<b>Total</b>	<b>\$573,500.00</b>	<b>\$554,650.00</b>	<b>\$552,900.00</b>

##### **Technology Plan Timeline**

**2005 2006** Current practices:

- 1) **Integration Strategies** listed in Section 4
- 2) **Technology Integration & Professional Development** proposal to provide collaborative weekly time for teacher PD described in Section 5 and the establishment of the Curriculum Council created to address overall curriculum integration.
- 3) **Hardware and Software** network access accomplished and maintained. Software lists available for K-5; 6-12 through Technology newsletter, posted online in Technology Links Web site, and *MAPS Technology Curriculum Guide* CD. MAPS Director of

Technology is currently exploring solutions, based on cost and network speed, to increase bandwidth through Charter or other commercial IP services and/or fiber installation.

**2006- 2007** Future practices:

1) **Technology Integration:** Curriculum Council and the Professional Development committee will focus on student achievement through support of curriculum study and planning, data collection and technology integration. These activities will be conducted within small collaborative learning communities in schools and across content areas. Supervisor of Technology Integration will assist and consult on Technology integration needs as determined by data analysis of student achievement.

2) **Professional Development for Technology:**

a. Continue to promote additional release time offered to teachers collaborating with each other and Supervisor of Technology Integration on specific projects.

b. Monthly one-on-one 50 minute planned sessions with individual/team teachers using roving subs, available on request.

c. Increase teachers' basic competence (still an area of need) with all applicable district technology per teacher's position. Use the ISTE checklist for teachers as a Survey on use of basic technology applications. Deliver February 2006 and annually afterward. See Appendix II.

d. Promote the use of MAPS Supervisor for Technology Integration as a "guest teacher" when teacher is not comfortable with software/technology. Currently increasing in practice and to continue throughout Plan Period.

e. Provide and promote more information on new teaching methods and strategies that involve "active learning" to meet students' needs individually and engage in more project-based learning.

3) **Hardware/software access –**

a. MAPS Director of Technology will continue to explore solutions, based on cost and network speed, to increase bandwidth through IP service providers and/or fiber installation.

b. Purchase K-5 library software for electronic catalog capabilities.

c. Continue update of software lists in the Technology newsletter and posted online in Technology Links Web site.

d. MAPS Technology department will review presentation equipment coverage in schools, such as data projectors.

4) **Evaluation** - ISTE Core Competency Checklist will be updated by Supervisor of Technology Integration to include more skill examples and resources and specific software program references.

**2007-2008**

1) **Technology Integration** as outlined above with needs assessed annually through the mechanism of the Curriculum Council as student data is revealed.

2) **Professional Development**

a. 90 minute release time proposed to implement in Fall 2007 initiated and followed through by action of the district Professional Development Committee.

- b. Continue processes to “re-work the learning environment” with integration of networked, distance resources, and student-driven projects. MAPS Supervisor of Technology Integration will assess and promote starting Fall 2007.
  - c. Continue to inform and instruct on the issues of copy, plagiarism, and the techniques of citation of all types of sources. Expand focus in early 2007
  - d. Continue to promote the ISTE Technology *Standards for School Administrators* (TSSA) as support for teaching and learning with technology continues to evolve in each building. Focus and expand Fall 2007
- 3) **Hardware/software access** –
- a. MAPS Director of Technology will recommend the best solution based on cost and network speed, to increase bandwidth through Charter services or fiber installation
  - b. Increase number of computers in classrooms based on teacher application of how it will be used to increase student achievement. Implement starting Fall 2007 – through Plan Period.
  - c. List of technology equipment available for loan to be distributed to all staff. To be completed and distributed by Supervisor for Technology Integration by Fall 2007.
  - d. Continue update of software lists in the Technology newsletter and posted online in Technology Links Web site.
- 4) **Evaluation** - ISTE Core Competency Checklist will be administered both online using the MAPS Web Site Survey tool and on paper, as teachers choose to complete. Supported by building principals and Building Technology Coordinators. Results to be tabulated and distributed by Supervisor for Technology Integration.

#### **2008-2009**

##### **1) & 2) Technology Integration Professional Development focus:**

- a. Promote Information Literacy among all teachers and staff to guide users to seek, find, evaluate and use the vast amounts of information now available online in a more effective and accurate way. Expand focus in Fall 2008

##### **3) Hardware Access/software** –

- a. Incorporate bandwidth upgrades to MAPS WAN.
- b. Continue to expand K-5 libraries electronic resources and catalog
- c. Continue update of software lists in the Technology newsletter and posted online in Technology Links Web site.
- d. Continue to increase number of computers in classrooms based on teacher application of how it will be used to increase student achievement. Implement starting Fall 2007 – through Technology Plan Period.

- 4) **Evaluation** - ISTE Core Competency Checklist to be re- administered.

#### **IV. Funding and Budget: Section 14: Coordination of Resources**

##### **MAPS Financial plan for long-term technology investment includes:**

- 1. Continued leasing of computers
- 2. Exploration of potential advantages of the buy-back program to purchase some computers at the end of a lease cycle.
- 2. Continued use of free Compaq software Paqs to supplement the standalone software

titles.

3. Continued use of temp employees to install and rotate hardware during the summer lease cycle.

Funding sources will continue to be explored and sought as they arise. These include but are not limited to: Title Technology Funds, Federal Grants as applicable, Marquette Foundation and Excellence in Education Awards, partnerships with NMU and MARESA, NEA semi-annual grants, other corporate grants such as the *HP Technology for Teaching* Grant which a team of Graveraet Intermediate School teachers are currently applying for.

## V. Monitoring and Evaluation: Section 15: Evaluation

The following strategies are used by MAPS Technology Department and the district at large to determine the extent to which activities are effective. These strategies help by integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to increase individual achievement.

### Formal Evaluations --Technology Department:

**Former Teacher Survey for Technology:** Using the STAR results obtained for use for the former Technology Plan results are as follows: 50% perceived proficiency; 50% perceived ability to utilize multimedia in the classroom; 33% felt comfortable with classroom technology integration.

**Currently teacher evaluation** has been more individualized and outreaching. Various instruments have been used to gauge staff technology comfort and ability, such as: MAPS Technology Department District Needs Survey Winter 2003; NSDC Professional Development survey in Fall 2004; WMU TELL Survey Fall 2004.

### Informal Evaluations-

1. Currently most planned workshops and programs are evaluated using a Technology Professional Development form (Appendix III). These forms are tabulated and recorded with other district data on Professional Development.
2. Building Technology Coordinators also provide input in the form of monthly logs of technology interventions in their buildings. These are used to discern individual building needs.
3. Check lists are used to work one-on one with teachers during planned formal technology visits.(Appendix IV)
4. The *INTEL Teach to the Future* program has an online evaluation that participants use to provide information to INTEL, the results are available to the district in the INTEL master teacher account.
5. The *unitedstreaming* two-week workshop provided teachers the opportunity to submit a narrative of the effects of integrating *unitedstreaming* in classroom curriculum. (Appendix V).
5. Daily input is gathered and used through e-mail, phone and helpdesk communications.

**Future:**

**Formal Evaluation** – survey teachers and staff using Core Competencies in all areas created through a modified version of ISTE Standards for Teachers Checklist. This instrument will be modified to include resources and examples to clearly indicate technology use and determine the “*ability of teachers to teach, and enabling students to reach challenging state and national academic standards.*” (see Section 13 and Appendix II)

**Informal Evaluation** – will continue as above through all sources and means to gain input for modification of processes and programs.

**Former Survey -- District Administration:** These were administered in various ways: online, paper through the support of MAPS central and school administrators, Building Technology Coordinators and MAPS Supervisor for Technology Integration.

**Future Survey – District Administration:** for School year 2005-2006 – ISTE Core Competency Checklist (see Appendix II.) will be updated with more skill examples and resources by Supervisor of Technology Integration. It will be administered both online using the MAPS Web Site Survey tool and on paper, as teachers choose to complete. It will be supported by Central administrative staff and Building Technology Coordinators (see Section 13)

In order to meet future goals, more applied technology Professional Development (as outlined above in Sections II.9 and II.10) in focused areas indicated by the ISTE survey results will be continuously conducted.

**V. Monitoring and Evaluation: Section 16 Acceptable Use Policy**

MAPS District recognizes existing federal requirements for privacy and safety as stated in The Children’s Internet Protection Act [CIPA]. All District Acceptable Use Policies are posted online at [www.mapnet.org](http://www.mapnet.org)

The district currently uses the Surf Control software to block sites by chosen categories and blocks student e-mail, as well. Students are not allowed to use instant messaging.

## **Appendix II**

**Teacher Core Competencies (Criteria from ISTE Standards for Teachers)**

**Appendix II. for: V. Section 15**

**TECHNOLOGY OPERATIONS AND CONCEPTS**

A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology.			
Skill Area	Examples	I can	I need help
Operating System	1. Saving/retrieving files, 2. Logging on from other computers, 3. Add/change printer –using the Microsoft “Add a Printer Wizard”		
Trouble shooting	Hook up the computer: cables, mouse, and keyboard, Change a print cartridge, Check your network connection Send a Work Order		
Word processing-	Formatting - fonts & spacing, Design a quiz or worksheet, Make a table		
Multimedia	draw/paint; digital video; digital cameras; import and insert graphics		
Presentation software	Design and present		
Database management	Use existing program , create a database		
Spreadsheet	Create lists, charts, calculate and analyze data		
E-mail	Send, receive, use attachments, organize mail, send pictures		
Ethics	Copyright law, netiquette		
Health and Safety	Internet safety, ergonomics, School AUPs; diversity and equity issues		
Internet	Searching techniques and site evaluations; Create simple web pages		

B. Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

Skill Area	Examples	Yes	No
Attends Professional Development	Through the district, MARESA, online, NMU		
Evaluates how technology supports student learning	MICLiMB, methods articles, classroom observation/assessment		

**II. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.**

Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners through

- a. use of current research
- b. identification, location and evaluation of technology resources
- c. manage use of technology in learning activities
- d. plan strategies to manage student learning in a technology-enhanced environment

Skill Area	Examples	I can	I need help
Plans developmentally appropriate learning opportunities	BS-ISD online integrated lessons; MICLiMB		
Applies technology-enhanced instructional strategies	Uses online Graphic Organizer software (TimeLiner, Inspiration)		
Meets diverse needs of learners	Use graduated rubrics		
Applies current cited research that's appropriate	<a href="http://www.macul.org">www.macul.org</a> ; <a href="http://www.iste.org">www.iste.org</a>		
Identifies, locates, and evaluates tech resources	Tech Department, M:Drive on district network; Technology web page& newsletters; BTCs		
Knows tech support procedures	Work Orders		
Design classroom procedures	Follow/adapt Lesson procedures for individual classes		
Arrange for learning technical skills	Tech Dept or How To's		
Plan time management	Run through the assignment/activity beforehand		
Schedule student projects	Include presentation time or space to post; post to a web site		

### III TEACHING, LEARNING, AND THE CURRICULUM.

Facilitate technology-enhanced experiences that address content standards and student technology standards.

- a. use technology to support learner-centered strategies that address the diverse needs of students
- b. apply technology to develop students' higher order skills and creativity.

Skill Area	Examples	I can	I need help
Facilitate technology-enhanced experiences	Provide opportunities for exploration; use project-based assignments		
Address content standards	Use MICLiMB		
Address student technology standards	Use Technology Curriculum Guide		
Address diverse needs of learners	Differentiate with rubric scoring		
Develop higher order thinking	Use spreadsheets and databases to analyze data		
Support Creativity	Suggest a variety of assignment products/outcomes		
Vary student grouping	Use lab, classroom and small group formats		

### III. ASSESSMENT AND EVALUATION.

Apply technology in assessing student learning of subject matter using a variety of assessment techniques.

- a. Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- b. Apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity

Skill Area	Examples	I can	I need help
Assess student subject matter knowledge			
Assess student technology skills	Check with the lab teacher; demo the skill		
Use a variety of assessment techniques	Rubrics, products, paper/pencil		
Use technology resources to collect, analyze and communicate data	Chart in a spreadsheet		
Use data to improve instruction	Modify lesson plans for next time		
Assess student communication	Use rubrics		
Assess student productivity	Use rubrics for student products		

## V. PRODUCTIVITY AND PROFESSIONAL PRACTICE.

Use technology resources to engage in ongoing professional development and lifelong learning.

- a. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning
- b. apply technology to increase productivity
- c. use to communicate and collaborate with peers, parents and the community to nurture student learning.

Skill Area	Examples	I can	I need help
Identify your short & long term technology needs and develop a plan	Take a self-assessment		
Utilize and evaluate Professional Development	District; MARESA; Online: NMU		
Evaluate and reflect on professional practice	Compare current practices with current research/methods		
Make informed decisions to improve student learning	Utilize current research		

## VI. SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.

Understand, model and teach legal and ethical practice related to technology use.

- a. apply technology resources to enable and empower learners with diverse backgrounds
- b. identify and use technology resources that affirm diversity
- c. promote safe and healthy use of technology resources
- d. facilitate equitable access to technology for all students

Skill Area	Examples	I can	I need help
Model and teach legal and ethical practice	Use the Ethics section of the Technology Curriculum Guide		
Select and use technology resources for student diversity	Use the Special Needs resources listed in the Teacher Resources section of the Technology Curriculum Guide		
Promote safe and healthy use of technology resources	Information for Today – Safe Internet Integration <a href="http://ift.merit.edu/">http://ift.merit.edu/</a>		
Provide equitable student access to technology through facilitation and advocacy	Refer to the MAPS Non-discrimination and Equal Access Policy in the Technology Curriculum Guide		

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## **Appendix III**

**Appendix III- Evaluation for Technology Professional Development**

Date \_\_\_\_\_

**Topic: Digital Media (Title II and MAPS PD funds)**

Please rate the following areas using the scale below.

	<b>Poor</b>	<b>OK</b>	<b>Fair</b>	<b>Good</b>	<b>Excellent</b>
1. Overall, this session was:	1	2	3	4	5
2. Topic presented kept my interest	1	2	3	4	5
3. Information was presented clearly	1	2	3	4	5
4. This session provided me with usable knowledge	1	2	3	4	5
5. Your feelings on additional sessions relating to this topic	1	2	3	4	5

6. Which best describes your computer knowledge                      Expert              Intermediate              Beginner

7. What are one or two things you found most useful in today's session?:

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8. Additional Comments:

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## **Appendix IV**

**Appendix IV -- Teacher Technology Days ---**  
**Checklist of Tech to Explore**

Technology web sites:

<http://www.mapsnet.org/pages/fdarling/Newsletter/Fall%20Newsletter2005.htm>

<http://www.mapsnet.org/pages/fdarling/>

**MAPS Technology Links** in Favorites in Internet Explorer

Posting files to your web site?

Using the Scanner or Burning a CD

New Program(s): Kidspiration, Map Maker's ToolKit, TimeLiner, Type to Learn, Jr., other Lab Software: (available in lab CDs)

Using the digital camera -

Log on to Reading a-z.com [www.readingatoz.com](http://www.readingatoz.com)

Log on to UnitedStreaming - [www.unitedstreaming.com](http://www.unitedstreaming.com)

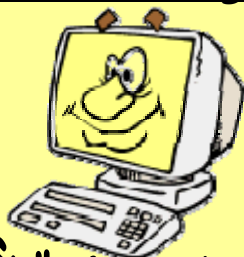
Register using the school pass code 8120-B400

Outlook e-mail questions - clean up your mailbox, Use the Calendar

Other Stuff - PowerPoint, Excel, Movie Maker, set up presentation cart for Parent Conferences/Open Houses

Using the new kids search web site: Facts for Learning:  
<http://factsforlearning.2facts.com>

**MAPS Technology User**



**Smile for Technology**

## **Appendix V**

## Appendix V

### **Narrative Evaluation of United Streaming in the Classroom Using Anecdotal Notes\***

From *Interactivity in the Classroom*, Harold M. Horowitz, program director Educational Technology IBM Corporate Education Center.

How was class time spent by the instructor?

- Time before class preparing for movie use
- Time during class showing clips and discussing them
- Time after class storing or reflecting on movie use

How was class time spent by the students?

- Time during class viewing clips and discussing them
- Time on any follow-up or related activities

What was the students' attentiveness and apparent interest?

Compare your new lesson presentation to when you presented this lesson previously

**without using the movies:**

- Were students more attentive and interested
- Was the level of discussion more in-depth
- Was the level of understanding greater
- Was student participation greater

What was the nature (more complex or simple fact) of the students' questions?

How effective was the use of content presented visually through the movie medium?

- Viewing content visually was more descriptive
- Concepts were more clearly presented in movie/clips
- Students could develop and relate pertinent ideas and concepts (Synthesize)
- Students tend to remember information easier and more correctly (gain knowledge)
- Students can connect new concepts to other previous knowledge

#### **Ideas for Recording Data:**

1. Assessment notebooks – use date and comments for movies/clips viewed, keeping in mind the above questions.
2. You can keep these on separate cards or sticky computer labels. If you were interested in assessing by student (for other purposes) -- they can go right into students' individual assessment folders or individual students' pages in a 3-ring binder.

\***Anecdotal Notes** are short descriptions of meaningful incidents, events, and student comments that you observe (and hear) as students are engaged with Journey North. Many teachers try to record just what they observe or hear; at later point, they review notes and identify what they reveal about student thinking, understanding, attitudes, and abilities.

Annenberg, CPB. (2004) *Journey North. Assessment Strategies and Tools: Documenting Assessment*  
Retrieved 6-6-05 from <http://www.learner.org/jnorth/tm/assessment/Document.html>