

Thornapple Kellogg Schools

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District ID: 08050

Technology Plan

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Kent Intermediate School District: 08050

Table of Contents

Thornapple Kellogg Schools	1
Introductory Material	3
District Mission Statement	3
Introduction	3
I. CURRICULUM.....	6
A. Curriculum Integration	6
B. Student Achievement	10
C. Technology Delivery	10
D. Parental Communications & Community Relations	11
E. Collaboration	11
II. PROFESSIONAL DEVELOPMENT	13
F. Professional Development	13
III. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT AND SOFTWARE	19
H. Infrastructure, Needs/Technical Specifications, and Design	19
I. Increase Access	21
IV. FUNDING AND BUDGET	23
J. Budget and Timetable	23
K. Coordination of Resources	24
V. MONITORING AND EVALUATION	25
L. Evaluation	25
M. Acceptable Use Policy	26
Appendix A – School Buildings and Facilities	28
Appendix B – Curriculum Benchmarks	29
Appendix C – Wide Area Network Diagram	52
Appendix D – Acceptable Use Policy: Staff	53
Appendix E – Acceptable Use Policy: Students	55
Appendix F – USF E-Rate Requested Products and Services	57

Introductory Material

District Mission Statement

“To encourage and develop the positive potential of each student.”

Introduction

As of count day, fall 2011, enrollment at Thornapple Kellogg Schools is 3090 students. 52% of the student body is male and 48% is female. 92% of the student body is Caucasian with the remaining 8% divided between Asians, African-Americans, Filipinos, Hispanics and Native Americans. The district employs 154 teachers and has three elementary schools (K-1), (2-3), and (4-5), one middle school (6-8), one high school (9-12), a special education building, and an alternative education (9-12) site. We also have the usual support buildings including administration, transportation and a maintenance barn.

(Appendix A)

Thornapple Kellogg Public Schools is a rural district with a population of approximately 14,000 who reside in northwest Barry County. It is one of the many schools that were created by the WK Kellogg foundation grants in the 1930's. These grants were aimed toward small rural communities with an agricultural base that needed buildings and equipment and assistance in setting up schools. The district has progressed from the original single building to our current building configuration.

Median family income is slightly above the state average, while the median personal income is slightly below the state's average. The average price of a house is also just above the state average. While the number of individuals with a high school diploma in this district is greater than the state average, the percentage of individuals holding a bachelors degree is significantly lower than the state average. The number of families classified as “economically disadvantaged” is roughly half the state average. Thirty-two percent of our students qualify for free/reduced lunch benefits.

Thornapple Kellogg schools are located in and around the village of Middleville. Middleville is on M-37, geographically “centered” between the larger cities of Grand Rapids, Kalamazoo, and Battle Creek – being approximately 30 miles from each. Hastings, the county seat, is 10 miles away. With the tremendous southern migration of the greater Grand Rapids area, Thornapple Kellogg is experiencing a 1-2% annual growth rate in the school population.

Although residing in Barry County, Thornapple Kellogg belongs to the Kent Intermediate School District. With its current population, Thornapple Kellogg is a mid-sized (class B) district in the intermediate system. We are able to share services, athletic experiences, vocational education, advanced technical education, specialized education, and transportation within the KISD region.

We have a Superintendent, an Assistant Superintendent – primarily designated as the curriculum director, a Business Manager, a principal for each elementary, a principal and assistant principal in the middle school, and a principal, assistant principal, and an athletic director (who also serves the middle school) in the high school. There is a district technology director, a district information specialist, and a network systems' administrator who support, coordinate, and oversee district issues, as well as an elementary technology coordinator, a para-professional at the middle school, and a para-professional who serves our three elementary buildings. Our teaching personnel, in both elementary and secondary,

are assigned classroom populations and programs according to contractual ratios. Numerous support personnel assist the teachers in each building.

District technology mission/vision statement:

Mission

Using technology to add value to the educational experience of the students, staff and community of Thornapple Kellogg Schools.

Vision

“Information” *Sharing is where it’s at.*

Goals

- That technology be used to effectively “remove the walls” of the classroom, so that learning can be accomplished by our students at any time of the day or night, in any locale, via technology.
- That all teachers create an up-to-date web presence that is an extension of their classroom, enabling parents to always know what is going on in the classroom and students with the ability to access assignments and relevant research.
- That teachers use the appropriate technology on a daily basis as a means of meeting the districts’ educational goals for our students.
- That our students be evaluated on an annual basis, via standardized tests given on the computer, to determine precisely where the students are at educationally, enabling teachers to customize lesson plans to meet the specific needs and skills of their students.
- That our library media centers evolve into centers of “Information Technology”, and in the process become a place where our students learn effective information retrieval skills.
- That our technologies be utilized to keep our community involved in the educational “happenings” and “opportunities” that our district offers.
- That we continue to improve the technology skills of our staff via the “Summer Technology Academy” and regular technology “Quickies” held throughout the school year.
- Professional Development will be the foundation for staff to raise their skill and knowledge level. As their skills develop staff will make appropriate decisions for the integration of technology.

How the technology plan ties in with the district mission and school improvement plan:

The technology plan, is consistent with our vision, “Using technology to add value to the educational experience of the students, staff and community of Thornapple Kellogg Schools”, which in turn is driven by our district school improvement plan.

Goals for district teachers and students:

- Improve information sharing between students, staff and community. This will be accomplished via increased utilization of team sites on our SharePoint web site and a new web based Student Management System.
- Improve technology skills of students and teachers. This will be accomplished by working with the district School Improvement Team to continue to develop curriculum offerings within our existing curriculum to expand student opportunities to integrate technology in their day-to-day classroom experience. Staff will continue to be offered the latest in classroom educational technologies and ongoing training in its use.
- Improve performance of students and teachers by working with departments, grade level committees and the School Improvement Committee to ensure the relevance of our student educational offerings.

Classroom vision

To use technology to develop educational opportunities appropriate to the skills and needs of each student; thereby maximizing their educational experience.

I. CURRICULUM

A. Curriculum Integration

Goals and strategies, aligned with challenging State standards, for using telecommunications and technology to improve teaching and learning.

Thornapple Kellogg Elementary K-5

This proposed curriculum sets criteria for the Thornapple Kellogg Elementary Schools (McFall Elementary grades K-1, Lee Elementary grades 2-3 and Page Elementary grades 4-5). Skills students will need to master at each elementary grade level have been identified. Applications of the goals are based on board approved curricula. Curricula are correlated with the Michigan Educational Technology Standards www.techplan.org. The MEAP, taken directly from Common Core standards, is then correlated effectively within the technology lesson objectives. The Elementary Strategic Plan's Key Thrusts includes utilization cutting-edge technology to enhance instruction.

Thornapple Kellogg Elementary Schools continue to improve the level of curriculum integration that exists today. We are evaluating and improving our instruction on an on-going basis. This document will serve as our guide for further improvement.

All K-5 students will have experiences in keyboarding and word processing, incorporating this type of technology in all areas of the curriculum. Grades 2-5 include multi-media, online research and desktop publishing in all areas of the curriculum. Goals in all areas include: providing United Streaming for teachers to access educational video downloads to enhance instruction.

Students are evaluated annually via the computer, using the Scholastic Reading Inventory. The SRI software generates a customized, level appropriate reading list for the student. Additionally, teachers utilize the scores to create individualized lessons to improve their students reading skills. Plans are in place to create a Windows Sharepoint Services server to warehouse all student testing information, enabling teachers and principals a multitude of different ways to evaluate student performance and to enable them to create personalized, skill appropriate lessons.

The technology department will provide and support these resources:

- SRI
- Discovery Education (United Streaming and Grade Level Standards Assessment)
- Reading A – Z (RAZKids)
- IXL.com (math practice)

Teachers will continue to be offered technology professional development opportunities and utilize the latest, Best Practices research to develop technology centric lesson plans.

For information regarding the Michigan Education Technology Standards for Students, please refer to these two links: <http://techplan.edzone.net/METS/METS2009PK2.pdf>
<http://techplan.edzone.net/METS/METS20935.pdf>

For details, see Appendix B

Middle School Overview Grades 6th – 8th

All middle school teachers will integrate technology outcomes, based on the Michigan Educational Technology Standards, across the curricular areas throughout the school year to assist our students in preparing for the 8th grade technology literacy requirement. Outcomes include the following topics:

- Keyboarding
- Word Processing
- Desktop Publishing
- Multimedia Projects
- Internet Research Skills
- Spreadsheet Applications
- Database Applications

In addition to integration in the curricular areas, 6th, 7th and 8th grade students also have the opportunity to take two exploratory classes involving technology skills.

The first class is called Computer Class and is offered at all grade levels. Computer students are exposed to the same technology benchmarks as the content area teachers, but have the opportunity to do in-depth computer projects over a 9-week period and include software programs such as Microsoft Word, PowerPoint, Microsoft Publisher, Inspiration, Hyperstudio, Excel, and Mavis Beacon.

The second exploratory course is called Technology Education. At TK Middle School this class begins in the 6th grade with a class called INTRODUCTION TO TECHNOLOGY. Students will spend 12 weeks learning the name and use of hand tools, proper safety procedures necessary to function safely in a technology lab studying the evolution of technology and group problem solving. The Systems Model of Problem Solving is introduced and used for all problem-solving activities. The class is planned around two group activities. Evolution Display is the first activity. The students work in groups of four or five. Their problem is to select a technology, research the history and choose the six most important advancements in that technology. They must prepare a PowerPoint presentation with six important steps in the advancement of the Technology, build a model of one of the steps, prepare a typed one-page report about the steps and give a presentation to the class. Students use Internet, Encarta, books and magazines to research and get pictures for their PowerPoint presentation. They use Google Docs and/or MS Word to organize information and type reports. The video camera is used to tape the presentation to gain feedback before getting up in front of the class. The second activity involves designing and creating a vehicle that travels along a wire. Only parts provided by the instructor may be used. They receive \$100 in technology money they may use to buy and sell materials during this activity. The winning vehicle is the one that has the best distance/cost ratio. Each group is assigned a computer that they use to access information and record transactions on a spreadsheet ledger. Very little is done with pencil and paper.

Exploring Design is a 7th grade class, and is the most popular technology education class. The class lasts for nine weeks, and is planned around the solution to one problem. The problem is to design, produce, and race a CO² race car that follows the rules and limitations of the race. The activity is followed by student competition. During this activity the students are introduced to lab and machine safety, proper class conduct and class organization. Students apply the SYSTEMS APPROACH TO PROBLEM SOLVING, which helps the students to organize and record thought processes, construction procedures,

and testing procedures. The building of Race Cars is not a new idea. The use of the Systems Approach to create the vehicle is somewhat new. It allows the students to come up with their own carefully planned solution to the problem and not a copy of the teacher's solution. With the use of technology, the computer and a program called Auto Sketch we are adding the practical application of computer assisted drafting to the design process. They use a wind tunnel and other testing devices to get feedback while they design and create this racer.

At the 8th grade level students are offered Technology Education Class. In this class, groups of two to three students choose a series of one and two week activities that are adapted from the MOTEC Curriculum. In these activities the SYSTEMS APPROACH TO PROBLEM SOLVING is used to help the students apply academic knowledge acquired in Math, English and Science along with the use of technology to solve design problems. One of the most challenging of the problems is to design and create a vehicle that is powered only by the spring of a standard mousetrap. After the vehicle is tested students use applied math to determine the force that the mousetrap applies to the back axle and the velocity and speed in mph. of the vehicle.

Another activity is called Controlling Systems. In this activity the students create a robotic vehicle from Legos and program it using a computer and an interface to travel through a maze.

Students are evaluated annually via the computer, using the Scholastic Reading Inventory. The SRI software generates a customized, level appropriate reading list for the student. Additionally, teachers utilize the scores to create individualized lessons to improve their students reading skills. Plans are in place to create a Windows Sharepoint Services server to warehouse all student testing information, enabling teachers and principals a multitude of different ways to evaluate student performance, and to enable them to create personalized, skill appropriate lessons.

Teachers will continue to seek technology professional development opportunities and utilize the latest, Best Practices research to develop technology centric lesson plans.

For details, see [Appendix B](#)

High School Overview Grades 9-12

This proposed curriculum sets criteria for Thornapple Kellogg High School (grades 9-12). Applications of the goals are based on board approved curricula. Curricula are correlated with the Michigan Merit Curriculum (MMC) and the Common Core State Standards (CCSS). The Michigan Merit Exam (MME), taken directly from these standards, is then correlated effectively within the technology lesson objectives. The High School is evaluating and modifying their curriculum to meet the requirements according to these standards.

Thornapple Kellogg High School is full of pride with the level of technology curriculum integration that exists today. We are evaluating and improving our instruction on an on-going basis with technology as a focal point. This document will serve as our guide for further improvement.

Technology at the high school is a required element, each student must complete at least one trimester of Career Exploration and Computing (Technology) Skills. This course satisfies the MMC on-line learning component. TKHS offers numerous “technology only” classes. Almost every student takes advantage of these offerings. More importantly, technology is integrated into every TKHS course to enhance instruction and student learning.

The ever growing need for technology is very present at the high school as open labs are always full and booked well in advance. The technology in our classrooms is driven by the CCSS and the MMC. A “core” goal is to utilize technology for collaboration and communication with all stakeholders (students, parents, teachers, and administration). Teachers utilize technology with the objective of articulating with the College and Career Readiness (CCR) anchor standards. The implementation of Universal Design for Learning (UDL) reduces or eliminates challenge or resistance in order to make learning accessible to all students. Equitable access through UDL strategies are achieved through purposeful technology in the classroom to meet the needs of our diverse learners.

Students are evaluated annually via the computer, using the Scholastic Reading Inventory. The SRI software generates a customized, level appropriate reading list for the student. Additionally, teachers utilize the scores to create individualized lessons to improve their students reading skills. Plans are in place to create a “warehouse” of all student testing information, enabling teachers and principals a multitude of different ways to evaluate student performance and to enable them to create personalized, skill appropriate lessons.

Teachers will continue to seek technology professional development opportunities and utilize the latest, “best practices” research to develop technology centric lesson plans.

For details, see Appendix B

B. Student Achievement

Strategies that are based in research and that integrate technology into curricula and instruction for purposes of improving student academic achievement and a timeline for this integration.

Staff in the Thornapple Kellogg district belong to professional organizations, read relevant journals, attend conferences, and receive regular, relevant training to ensure that they are exposed to the latest research and curricular ideas involving integration of technology into our existing curriculum.

We are currently using computerized testing in our buildings to ensure that our students are learning what we are teaching and to help prepare them for taking standardized tests (such as MEAP and SRI.)

We are developing data analysis tools for common assessments and providing training for our teachers in the analysis of this data, so they can provide better, more focused instruction to their students.

Technology is already integrated into existing curriculum in a wide variety of ways (see section A of Curriculum Integration.) We are exploring the implementation of summative projects (with a strong technology component) at the conclusion of the fifth, eighth and twelfth grades.

A significant methodology we use to determine how we are progressing with student achievement is the Adequate Yearly Progress (AYP) method. All schools in our district are currently making AYP, which pleases us.

Our students are also doing well on the state K-8 initiative, scoring well on the technology test we give to all eighth graders.

The new textbook adoption process favors texts with online resources.

Teachers are encouraged to consider online homework assignments.

We have recently purchased a SQL server with Windows Sharepoint Services and are in the process of developing better ways of information sharing to improve the instructional atmosphere of our schools.

C. Technology Delivery

Strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance learning technologies.

At TKHS we offer students classes via the Michigan Virtual High School program. Additionally, some of our staff are putting assignments, test reviews and relevant handouts on their teacher web sites.

We are using E2020 for credit recovery.

We offer a specialized Technology Education class at the MS and incorporate a multitude of technology deliveries into various HS courses (see **Appendix B**).

The new textbook adoption process favor texts with online resources.
Teachers are encouraged to consider online homework assignments.

The district has strong involvement in the Kent Intermediate School District/Grand Valley Metro Council joint WAN project.

The district uses United Streaming as its media content provider.

D. Parental Communications & Community Relations

Strategies to promote parental involvement and to increase communication with parents, including a description of how parents will be informed of the technology to be used with students.

Parent collaboration is strongly encouraged and can be witnessed through the following:

- Monthly Principals' Newsletters and Blogs
- Parent Lab Volunteers
- PTO Website
- Athletic Boosters Website
- District Website: www.tkschools.org
- Tech plan displayed on the web and shared in newsletters
- The Key: bi-monthly district news publication
- Teacher Newsletters
- Teacher Websites
- Technology Brochures at building levels
- Email Correspondence with parents
- Voicemail
- Homework Hotlines
- Emailed Progress Reports
- MS Team Newsletters
- Course Syllabus/Brochures
- Team Handbooks at the MS
- Parent Help Hotline at the MS
- Parents on the District Technology Committee

E. Collaboration

Strategies for developing programs, where applicable, in collaboration with adult literacy service providers.

Adult technology literacy is and will continue to be developed through a variety of courses offered by the Community Education Center. All technologies acquired throughout the district will be made available to the Community Education Center after school hours for the enhancement of technological literacy.

Courses offered emphasize a basic working knowledge of Microsoft Office products, including word processing, multi-media and desktop publishing. Further, digital camera and Internet classes are available. Students utilize the district website, handouts and available computers.

Collaboration between the Technology Department and the Community Education Department has led to an increase in technical offerings presented to the community.

The District Technology Department makes numerous technology training handouts (Handy Handouts) available to the community via our Technology website.

We have developed TK C.a.T.S. (where the Community and Technology Students come together), where district Technology Aides provide technology training for different components of the community.

II. PROFESSIONAL DEVELOPMENT

F. Professional Development

Strategies for providing ongoing, sustained professional development for teachers, principals, administrators and school library media personnel to ensure that staff know how to use the new technologies to improve education or library services.

Overview of Plan

Professional development at Thornapple Kellogg Schools is intended to align technology applications with our district technology mission statement, which is “using technology to add value to the educational experience of our students, staff and community.” It is the districts position that our teachers, principals, administrators, school library media personnel and support staff are the experts in their field and/or subject area. In recognizing this, it is the responsibility of the technology department to provide and maintain leadership and support for technologies and the duty of the Thornapple Kellogg staff to make sound decisions for its implementation. We realize that schedules, needs, and skill levels vary among staff members. In attempting to meet the needs of this diverse group the Technology Department takes a variety of different approaches and learning environments in our professional development to ensure that our staff is knowledgeable in the appropriate uses of technology and that technology integration aligns with state and national standards for teacher competencies.

Goals/Objectives

- All employees of Thornapple Kellogg Schools will be knowledgeable of the technologies that are applicable to their position in the district.
- Administrators and teaching staff will be aware of how to use available technologies to improve student learning.
- Professional Development will be the foundation for staff to raise their skill and knowledge level. As their skills develop staff will make appropriate decisions for the integration of technology.

Strategies

The following sections are examples of how Thornapple Kellogg is currently meeting the stated professional development goals. However, we recognize that just as the technology is continually evolving, changing and growing; so will our strategies for staff development.

Preparing New Staff

Technology has enhanced the productivity and professional practices of our staff (**International Society for Technology in Education** <http://www.iste.org/> and **National Educational Technology Standards** <http://www.iste.org/AM/Template.cfm?Section=NETS>). This has impacted the way we conduct our day to day business. We recognize and prepare for the impact that Technology at Thornapple Kellogg will have on incoming staff.

The first strategy used to ensure that incoming staff are ready to use and maintain technology for teaching and learning is requiring technology training with the district technology staff. This training is designed to provide new staff with specific skill sets necessary to begin the first day of school. It is also the ideal time to introduce key technology staff at each building, and to introduce new staff to technology the “TK way.” It is our intent that this overview will provide them with a clear

understanding of the general aspects of our network hardware and software. This is an optimal time to introduce the importance of information sharing and show some examples of how it is employed in our district. Examples of some of the “tech new and cool” happenings (electronic portfolios, electronic newsletters etc) are shared. Such examples provide real life models and set precedence for district expectations, as well as motivate innovative new staff.

Necessary account information and passwords for computer login, email, attendance software, copy codes, voice mail and phone security codes are distributed. In addition, a great deal of time is spent providing hands on training with step-by-step procedures in all fundamental software (attendance, email, grading, phones and web building). Staff will also create their personal web page at this time.

First of Year Staff Development

Professional development is provided to all staff, at all buildings, during in-service time at the beginning of the year. The technology staff at each building oversees this time and provides customized training for all building personal. Training consists of both hands-on computer time and discussions of upgrades and concerns and/or changes in the district’s technology. While content will vary at each building this has become an optimal time to set up teacher grade books, review attendance software and provide refreshers in particular software. This has proven to be an excellent way to ensure that our staff and our technology are ready to begin the school year. This time also assists and reinforces that teachers can demonstrate introductory knowledge, skills, and understanding of concepts related to technology. (***International Society for Technology in Education and National Educational Technology Standards***) Teachers requiring assistance with these basic skills are supported at this time.

Team Collaboration

The technology staff meets with department teams and grade level groups to plan activities, technology curriculum integration and relevant training sessions. This gives teaching staff an opportunity to brainstorm ideas, standards and set goals with each other and the technology staff. These meetings are set early in the school year and provide the groundwork for staff and student technology integration. The technology staff works as the visionary agent for the teaching staff.

A second example of team collaboration is demonstrated in our district wide and building technology committees. We have established committees at the High School, Middle School and three elementary buildings. Members of our building technology committees include a building administrator, the media specialist, technology staff, several teaching staff and ancillary staff. These committees have become a voice for technology in their respected buildings. Strategies for technology implementation and improved professional development have been the result of the committee’s time investment.

Our District Technology Committee serves to bridge our districts technology awareness. This group includes staff from each building as well as members from our community, students, administrators and a board member. This group is instrumental in sharing other buildings achievements, needs and goals for technology which in turn assists us in taking the appropriate steps for future staff development.

Ongoing Support and Development

“Quickies” are another way that professional development is provided throughout the school year. Quickie sessions began soon after our network went into place in 1996 and have since grown in interest and support. Developed by the Technology Department, quickies provide timely, immediate, relevant, hands-on training to staff. Training is held on a regular basis, before and after school and attendance is voluntary. Handouts are created for all training sessions and posted to the District Technology Website,

available to anyone at any time. Topics for quickie sessions are generated by staff and often pertain to something “new and cool” happening in the area of technology. Quickies add value and assist in the implementation of the technologies used in our district. On one level quickies assist and maintain technology expectations and procedures for our staff. On another level, quickies provide an excellent time for the technology staff and teaching staff to share their expertise. New ideas for training and exploration often evolve from these sessions.

For the past ten summers TK has hosted a summer technology academy. The academy provides over twenty-four hours of in depth training on a wide variety of topics. As with the quickie sessions, attendance is voluntary. Presenters and trainers include teaching and technology staff, as well as secretaries and paraprofessionals. Topics for sessions come directly from the staff at TK. The goal of the summer technology academy is to provide pertinent training to staff at a point in time when they don’t have the distractions of the normal school year.

The technology staff provides continued support on an ongoing/daily basis. In addition to formal training sessions, technology personnel at both the building and district level are available to assist staff in person, on the phone or via email. We also have building experts (teaching and support staff), that provide expertise in different facets of technology. Building experts can be extremely helpful to new staff who may feel intimidated or overwhelmed with technology. They are also models for other staff members of how technology, when implemented correctly, can enhance student learning. **(International Society for Technology in Education and National Educational Technology Standards)**

Professional Development Statewide

As part of our professional development plan it has become increasingly important to seek technology leadership and resources from outside of our district. Administrators, teachers, media personnel, support and technology staff are actively involved in a variety of expert groups and/or committees throughout the state of Michigan. These groups identify key points regarding the use and implementation of technology and meet a variety of needs including technical training, classroom implementation as well as serving as visionaries. Continued involvement prepares members for the evolutionary changes of technology. Involvement in outside groups is supported and advocated by our administration. Some of the groups that we are currently involved with include:

- **Michigan Association of Computer Users and Learners (MACUL)** – MACUL provides a yearly conference that our members attend. MACUL has become an excellent way for staff to expand their knowledge and their use of technology as it directly relates to its implementation in the classroom. Our staff has also shown leadership at MACUL by presenting at this conference. We currently have a member of our technology team on the MACUL board.
- **Michigan Association for Educational Data Systems (MAEDS)** – MAEDS provides technology staff with an in depth look at where technology is going and its effect on educational institutions. MAEDS provides a yearly conference and several mini-conferences throughout the year. MAEDS has proven to educate and assist in our future implementation technology resources. Technology staff has also shown leadership at MAEDS by presenting at the yearly conference.
- **International Society for Technology in Education (ISTE)** – ISTE provides technology and teaching staff with a futuristic look at technology in the school system. Members attend a yearly conference to stay current with updates and changes in technology.

- **MiCTA** – Provide telecommunications expertise. Yearly conferences provide insight on our current telecommunications and prepare us for future integration decisions.
- **Kent Technology Advisory Council (KTAC)** – This committee meets on a monthly basis throughout the school year. Members include technology staff from the school districts in our Intermediate School district. Agenda topics will vary from introducing members to new technologies, upcoming events, mandatory requirements and state deadlines. Meetings are an excellent way to share information and to gain insight and support for how other districts are implementing technology. Currently our technology director serves on the KTAC steering committee.
- **Kent Intermediate School District (KISD)** – Our district is part of the KISD. The KISD provides ongoing technical and in-service training in a variety of areas and skill levels. In addition to professional development within our district, the KISD has proven to be beneficial for staff development and training.
- **List serves and email groups** – Electronic discussions provide members with a variety of assistance ranging from content area development to technical assistance.

Professional Development Timeline

2012-13	2013-14	2014-15
<p>Elementary Buildings</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy 	<p>Elementary Buildings</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy 	<p>Elementary Buildings</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy
<p>Middle School</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy 	<p>Middle School</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy 	<p>Middle School</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy
<p>High School</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy 	<p>High School</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy 	<p>High School</p> <ul style="list-style-type: none"> • New Staff Training • First of Year Training – staff in-service time • Regular “Quickie Training” • Summer Technology Academy
<p>Administration</p> <ul style="list-style-type: none"> • New Staff Training • One on one task specific training • Regular “Quickie Training” • Summer Technology Academy 	<p>Administration</p> <ul style="list-style-type: none"> • New Staff Training • One on one task specific training • Regular “Quickie Training” • Summer Technology Academy 	<p>Administration</p> <ul style="list-style-type: none"> • New Staff Training • One on one task specific training • Regular “Quickie Training” • Summer Technology Academy
<p>Secretarial/Ancillary</p> <ul style="list-style-type: none"> • New Staff Training • One on one task specific training • Monthly meetings and training with building secretaries 	<p>Secretarial/Ancillary</p> <ul style="list-style-type: none"> • New Staff Training • One on one task specific training • Monthly meetings and training with building 	<p>Secretarial/Ancillary</p> <ul style="list-style-type: none"> • New Staff Training • One on one task specific training • Monthly meetings and training with building

G. Supporting Resources

Strategies and supporting resources such as services, software, other electronically-delivered learning materials and print resources that will be acquired to ensure successful and effective uses of technology.

A solid plan for professional development provides opportunities for continued growth and success, but also recognizes that not all staff will evolve at the same pace. The TK website is one way that we have attempted to resolve some of this diversity. Step-by-step handouts from training sessions are posted to the technology website. Staff has access to any and all material at any time; from any computer connect to the Internet. We are currently working to provide digital and audio training videos on specific skill sets as well. These are posted to the website for staff to access from within our district. In addition, all technology related policies and technology committee information is posted to the website. Staff can stay current with the changes and happenings of our district technology right from their computer.

We have implemented Windows Share Point Services. Share Point Services provide staff with information sharing solutions. Staff will have the opportunity to build personal portals, build sophisticated websites with custom lists and libraries, and create data sources to share, compare and contrast academic process of our students. We also train PTO and other relevant community members in web building skills so they can maintain their own presence on the TK Web Site.

As the technology skills of our staff increase so does the implementation of appropriate technologies for our students. It is our experience that staff that are informed and/or strive to understand the technology will make appropriate decisions for its integration. We will continue to evaluate our methods and resources for professional development aligning it with National Technology Standards and the goal of educating our staff for the evolutionary change of technology.

Acceptable Use Policies are in place for staff, students and community members who need access to the TK network. All users must sign and submit the Acceptable Use Policy before network access is provided. In addition, web building policies are in place providing the opportunity for parents and/or guardians to refuse any student information being posted.

Technology training folders are distributed to all new staff and made available to anyone who needs extra assistance. These manuals provide step-step directions on all of the software that we support. Manuals are updated on a regular basis.

Our media specialists do an excellent job of keeping informational and instructional technical literature on hand for staff.

Video is beginning to make its way into professional development. The Technology Department is beginning to digitize some of their training. Videos are linked from the website, providing training from any workstation connected to the Internet. We are also part of a video consortium with United Streaming. United Streaming provides access to thousands of content specific videos. Videos are downloaded, or streamed for staff and students access. Many of the available videos come with teacher instructions, tests and quizzes. We will continue to grow and expand our capabilities in the area of digital video.

Additional supporting resources, services and software, can be found in our district media centers and district technology department.

III. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT AND SOFTWARE

NOTE: The district currently receives USF re-imbusement for phone service, T1 for internet usage and associated ISP costs. The funds received are used in a variety of ways to support education at TK.

H. Infrastructure, Needs/Technical Specifications, and Design

Strategies to identify the need for telecommunication services, hardware, software and other services to improve education or library services, and strategies to determine interoperability among the components of technologies to be acquired.

Current status

The TK network is comprised of: (See Appendix C)

- A district MDF containing all the servers for the district. These include:
 - Windows 2003 Domain Controllers (2)
 - File Servers (2)
 - Connected to Tape Backup Device
 - Citrix Server (1)
 - IP Surveillance Servers
 - Network Management Servers (4)
 - Email Server (1)
 - Student Management Server (1)
 - Application Server (1)
 - This server also hosts our legacy website
 - Web Server (Microsoft Office SharePoint 2007) (1)
 - SQL Server (1)
 - Telecom Server (1)
 - Firewall (1)
 - Administration Server (1)
 - Also serves as a print server
 - Tape backup system (data and voice)
 - UPS for all servers
- A layer 3 switch functioning as the central point in our network
- A gigabit backbone connecting all buildings and IDF's
- All computers in the district connected to dedicated 100 megabit switches
- A networked teacher computer in every classroom
- Networked mini-labs in many classrooms
- Computer labs in all buildings
- All administrators and all secretaries have networked computers on their desktop
- All computers in the district are connected to the network and are connected via a T-1 to the internet
- Multi Function Devices (networked printer, copier, scan and fax) in every building
- Digital phone system providing phones and voicemail to all classrooms, offices and meeting areas
- Wireless cellular communication (via Nextel) between administrators, transportation and office personnel
- Centralized two-way wireless communication system

Technologies to Be Acquired

We are in a state of constant evaluation with an eye towards the future as we determine the appropriate technologies to be purchased. In addition we meet regularly with vendors and attend relevant conferences to determine future trends. This coupled with discussions with our technology teams enables us to make intelligent, informed purchases.

We are part of an Intermediate School District consortium providing us with high speed internet. We will continue to monitor the volume of our internet traffic and will increase our bandwidth as required. We have joined in an Intermediate School District consortium studying the feasibility of developing an offsite backup solution.

We will be upgrading our network infrastructure, improving the speed and reliability of our connections.

We will be creating a district wide, secure wireless network.

We will continue putting in networked projectors, with teacher amplified sound systems in all classrooms.

Michigan Virtual High School (MVHS) offers online classes to high school students. Many of the classes that TK does not offer are available on MVHS. Efforts are in place to implement a class that will allow students to register for MVHS classes and receive credit for the classes they complete.

As discussed below in the timeline, we regularly evaluate the needs of our students and staff and upgrade our servers, computers and printers as necessary.

Basic Strategies for Interoperability, Continuous Upgrading, and A Timeline

TK has standardized on one vendor for pc's, printers and network switches. This enables us to reduce support, maintenance and repair costs. Software purchases are also coordinated which enables us to provide focused training.

We have developed a "Value Rubric" that allows us to analyze decisions before they are made to ensure each purchase is in line with our mission statement, which is "To add value to the educational experience of the students, staff and community of Thornapple Kellogg Schools."

Computer desktop purchases are staggered, providing us with a wide range of ages. All levels are currently working on a three year plan to evaluate all technologies and replace as necessary.

We regularly evaluate our current servers against the needs of the district. Among other things, this evaluation factors in the age of the servers and their ability to provide adequate service. Servers currently under evaluation include a new domain controller, a new storage server (NAS/SAN), and a new application server

The districts Multi Function Devices are on a five year services contract. At the end of each contract, an evaluation of each device will determine the need to upgrade.

In the spring of 2009, we upgraded our fiber infrastructure at the High School. This was prompted by construction needs. The new fiber is capable of supporting a 10 gigabit backbone at the High School.

Along with the core network upgrade, we plan to upgrade the High Schools edge network. The edge switch will have 10/100/1000 capabilities for connected workstations and be connected back to the core switch utilizing the new 10 gigabit infrastructure. The current 10/100 switches that are located in the High School will filter down to the other buildings as necessary.

Technical Support

- Support, maintenance and repair procedures include:
 - Trained support and technical personnel at every level
 - A centralized technology support office to coordinate and provide higher level support training when required
 - A “Handy Handouts” section on the TK web containing over a hundred handouts covering topics which at one time or another have been addressed during our training sessions
 - Technology Aides – trained students who:
 - Repair hardware
 - Install software
 - Build web pages
 - Support software applications
 - Create solutions to problems which may or may not exist
 - Phone support
 - Building and technology district teams which meet regularly and proactively identify issues, problems and opportunities
 - TK Summer Academy – a week’s worth of technology training provided by the technology staff addressing areas of concern and interest
 - Email support
 - Open Source Help Desk software for High School and Middle School
 - Working with departments to create their own Technology Aides who are responsible for working with *only* that department
 - Detailed electronic technology inventories maintained at the building and district levels

I. Increase Access

Strategies to increase access to technology for all students and all teachers.

Equity Issues

- The technology department meets with the Special Education department annually to discuss ways of implementing technology to special needs students.
- The technology staff works with the Special Education staff to meet the needs of special needs students, including the implementation of voice input.

The plan addresses the steps that will be taken to ensure all students and teachers have increased access to technology

- All teachers have a teacher workstation
- Many classrooms have minilabs
- All buildings have computer labs which are scheduled by the teachers themselves
- Additional technologies and computer labs will be purchased as
- Technologies continue to be replaced as they reach an age where they can no longer meet the needs of the students/teachers
- Computers) are available for all students and teachers in each buildings media center
- Since the high school media center is also the community library, computers are available to our students to use whenever the community library is open
- We are part of an Intermediate School District consortium providing us with high speed internet. We will continue to monitor the volume of our internet traffic and will increase our bandwidth as required.

IV. FUNDING AND BUDGET

J. Budget and Timetable

Timeline and budget covering the acquisition, implementation, interoperability provisions, maintenance and professional development related to the use of technology to improve student academic achievement.

YEAR 1: 2012/13	General Fund (All Categories)	Voc. Ed.	2007 Technology Bond	E-Rate
Salaries & Benefits Technical Support Staff	\$375,000			
Hardware & networking costs	\$20,000		\$250,000	
Maintenance & service costs	\$25,000			
License Agreements	\$35,000			
Software & Curriculum Support	\$25,000			
Professional Development	\$2,000			
Technical Support				
Internet Access & Telecommunications	\$18,000			\$45,000
YEAR 2: 2013/14	General Fund (All Categories)	Voc. Ed.	2007 Technology Bond	E-Rate
Salaries & Benefits Technical Support Staff	\$407,000			
Hardware & networking costs	\$20,000		\$250,000	
Maintenance & service costs	\$25,000			
License Agreements	\$35,000			
Software & Curriculum Support	\$25,000			
Professional Development	\$2,000			
Technical Support				
Internet Access & Telecommunications	\$18,800			\$45,000
YEAR 3: 2014/15	General Fund (All Categories)	Voc. Ed.	2007 Technology Bond	E-Rate
Salaries & Benefits Technical Support Staff	\$410,000			
Hardware & networking costs	\$100,000			
Maintenance & service costs	\$25,000			
License Agreements	\$35,000			
Software & Curriculum Support	\$25,000			
Professional Development	\$2,000			
Technical Support				
Internet Access & Telecommunications	\$18,800			\$45,000

K. Coordination of Resources

Strategies that will be employed to coordinate state and local resources to implement activities and acquisitions prescribed in the technology plan.

Staff will continue to be encouraged to apply for appropriate and relevant grants at the state and federal level as well as from professional organizations such as MACUL and SBC.

The district will actively pursue programs sponsored by local Universities, businesses or other consortiums to attempt to leverage technology dollars which exist outside the district.

As the existing technology bond expires, the district will consider alternate funding models to ensure adequate technology resources.

TK has standardized on one vendor for pc's, printers and network switches. This enables us to reduce support, maintenance and repair costs. Software purchases are also coordinated which enables us to provide focused training.

Universal Service Fund (USF)

Thornapple Kellogg Schools has applied for and will continue applying for universal service discounts under the universal service support mechanism. E-Rate, which is a federal program created to provide discount reimbursements and assist most schools and libraries with obtaining affordable technologies including telecommunications and internet access. Discounts are based on an individual schools' enrollment in the National School Lunch program. The actual amount the district receives is a function of our discount and the qualifying technologies applied for. (See **Appendix F**)

V. MONITORING AND EVALUATION

L. Evaluation

Strategies that the district will use to evaluate the extent to which activities are effective in integrating technology into curricula and instruction, increasing the ability for teachers to teach and enabling students to reach challenging state and national academic standards.

State and national standards for students continue to grow and challenge districts to implement appropriate technologies into the learning environment. In just the past few months schools have been confronted a change in standards that will play a paramount role in the way school do business. New standards include, The Lt. Governor's Commission on High Education & Economic Growth, leading to the Proposed High School Graduation Requirements and The Michigan Educational Technology Standards, (METS). These requirements reiterate how increasingly essential that our staff to stay apprised of these challenges and increase their knowledge of technology to make appropriate decisions about its implementation in the classroom. Our technology plan is intended to address these issues and devise an appropriate plan to meet such standards and challenges. Use of computer network resources will be monitored and evaluated by its consistency with the district's educational goals and behavior expectations. While we have formalized certain aspect of our monitoring and evaluation, this process will continue to evolve.

Formalized pieces of monitoring and evaluation include the following:

- I.** District goals for annual monitoring appropriate technology integration by appropriate administrators and technology staff include:
 - Identifying appropriate technologies for given skill levels
 - Assuring that the district is aligning with state and national standards as they change and grow
 - Identifying appropriate technologies for the task
 - Data collection to establish trends

- II.** Unexpected outcomes
 - The speed at which the students incorporate new technologies and application into their academics
 - The creativity of our teaching staff when it comes to developing appropriate application integrating technology in to the curriculum
 - How many ways there are to effectively utilize existing technologies
 - How students and staff have become dependent on the use of technology in their everyday educational experiences

- III.** Plan for addressing unmet goals and objectives:
 - Pros and cons will be evaluated as we go
 - Appropriate key people are identified along the way to address solutions
 - Flexibility is built into the plan intentionally. Mid stream changes can be made as necessary

Our technology plan will be updated annually. The Technology Department will oversee this endeavor and rely on outside sources and people for necessary assistance.

Progress will be measured in numerous ways. Currently the following measures are in place:

- Hits on district website
- Computer lab sign ups
- Technology Checkouts (laptops, digital cameras, projectors, etc.)
- Demand for technology
- Yearly departmental and grade level meetings with technology staff
- Staff development attendance (during the school year and summer training)
- Data collected from student, staff and community surveys
- Building and District level Technology Committee impute

The district continues to make AYP and this past year all schools in the district received an A on the state report card. Teachers district wide are using technology to work on a coordinated, unified curriculum map. MEAP scores are trending upward and we are in the top third of the school districts in the Kent Intermediate School District.

M. Acceptable Use Policy

Strategies are in place to monitor the district's Acceptable Use Plan for staff and student use of the technologies.

Acceptable Use Policies will continue to change and evolve with the technology. They are “working” documents designed to protect the integrity of our network and the safety of our users. Acceptable Use Policies are reviewed on an ongoing basis by the building and district technology committees. Committees will identify any necessary changes and submit those changes to the board for approval. Completed versions will be posted on the TK website.

Computer and network Acceptable Use Policies are in place for all users of the TK network. Policies are designed with the premise of protecting personal security and safety, system and data integrity and safeguarding all hardware and software that is used at TK. In addition, Acceptable Use Policies are developed in compliance with The Children's Internet Protection Act (CIPA). Acceptable use policies in conjunction with server software and hardware reinforce Internet safety for our staff, students and community members by restricting the use of outside email, chat rooms and inappropriate material. A firewall server protects the district from outside attacks on our network. Internet filtering software (Watch Guard) is installed on the Internet server to filter websites by content, and subject matter. Watch Guard also allows system administrators to block sites by specific URLs. All formal policies relating to technology use in the district are formally approved by the TK Board of Education.

The staff Acceptable Use Policy is located in **Appendix D**. This policy was taken from the Board Policy EFA-R Computer Network. Upon signing this agreement, staff members agree to adhere to the outlined policies for themselves and ensure that students will follow the same protocol. The staff agreement details the following areas:

- **System Integrity and Security** – outlines the security of student data and passwords. Passwords for staff are changed on a regular basis adding a second level of security and integrity to student and staff records, data and documents. Staff are responsible for logging off the network when a computer is unattended.

- **Limiting Access** – refers to appropriate use of the Internet and email system. Watch Guard is our current Internet filtering software. This is incorporated to block inappropriate sites. Flexibility is built into Chaperon, allowing system administrators to block by subject matter, content and specific URL's. Staff are responsible for reporting any inappropriate and/or controversial websites to our district technology coordinator.
- **Use of Computers in a School District Library** – outlines that technologies in the school library will adhere to the same security regulations as other equipment in the district.

The staff Acceptable Use Policies clearly states that technology use throughout our district shall align with the district's educational goals and behavioral expectations. Staff will use technology to enhance and further their own education and that of others. Any staff member found in violation of the signed AUP will be referred to the building principle or administrator for appropriate action.

An Acceptable Use Policy is in place for students at Thornapple Kellogg Schools. This same policy is used for any member of the public who accesses technology at TK. The policy is part of the student handbook and is available in [Appendix E](#), as well as online. Upon signing this agreement users agree to adhere to the outlined policies for use of computer technology. This agreement details the safety and security of students, legal ramifications of technology misuse, vandalism and copy write infringements and setting priority of technology use. The Acceptable Use Policy for students and the general public clearly states that technologies at Thornapple Kellogg Schools shall be used exclusively to enhance and add value to the educational experience of the signed user. Any and all infringements of this agreement shall be reported to the building principle or appointed administrator. Thornapple Kellogg reserves the right to revoke and/or limit network access to users who are in violation of this agreement.

Internet Filtering

The district has installed a comprehensive internet filtering system on the external boundary of our network to filter all internet traffic. The purpose of this filtering system is to provide a safe computing environment for our students. While no filtering system can protect our students from all internet dangers, the technology and teaching staff maintain an ongoing pro-active vigilance to attempt to ensure that our students can use the internet safely.

Appendix A – School Buildings and Facilities

Thornapple Kellogg School Buildings and Facilities

BUILDING NAME	ADDRESS	TELEPHONE	GRADES SERVED
Central/Business Office	10051 Green Lake Road Middleville, MI 49333	269-795-3313	NI
Transportation	3625 Bender Road Middleville, MI 49333	269-795-5540	NI
Operations	3625 Bender Road Middleville, MI 49333	269-795-5535	NI
McFall Elementary	509 W. Main Street Middleville, MI 49333	269-795-3637	K-1
Lee Elementary	840 W. Main Street Middleville, MI 49333	269-795-9747	2-3
Page Elementary	3675 Bender Road Middleville, MI 49333	269-795-7944	4-5
Thornapple Kellogg Middle School	10375 Green Lake Road Middleville, MI 49333	269-795-3349	6-8
Thornapple Kellogg High School	3885 Bender Road Middleville, MI 49333	269-795-3394	9-12
Learning Center	507 W. Main Street Middleville, MI 49333	269-795-5571	UG

Appendix B – Curriculum Benchmarks

Thornapple Kellogg Elementary

Elementary Keyboarding Benchmarks

Grade	Curriculum Integration Goals		Application of Goal Examples	Timeline for Integration
K	Familiarity with keyboard Left/Right Hand positioning (yarn to divide keyboard)	Exploration	Key Recognition Games and Exercises	All Year Weekly Practice
1	Left/Right Hand positioning (yarn to divide keyboard)	Introduction	Games and Exercises	All Year Weekly Practice
2	Left/Right Hand positioning	Review	Games and Exercises	All Year Weekly Practice
3	Home Row Hand Position Key/Finger Accuracy	Practice	Drill games and exercises from appropriate software	6 weeks 2 sessions per week-25 minutes per session
4	15 words per minute 85% accuracy Home Row Hand Position Key/Finger Accuracy	Practice	Drill games and exercises from appropriate software	6 weeks 2 sessions per week-25 minutes per session
5	20 words per minute 90% accuracy Home Row Hand Position Key/Finger Accuracy	Practice	Drill games and exercises from appropriate software	6 weeks 2 sessions per week-25 minutes per session

Elementary Word Processing Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology	
K	Familiarity with menu Compose, graphic, print, quit keys: delete, return, shift	Introduction	Research and integration with interdisciplinary units	All Year	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
1	File menu: pen, print, quit Keys: delete, return, shift Use mouse to insert cursor	Introduction	Research and integration with interdisciplinary units	All Year	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
2	Review above Font selection/size Log in to class drive	Introduction	Research and integration with interdisciplinary units	All Year	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

3	File: save as, print preview, Edit menu: undo Spell Check Tab Key Font type and size	Introduction	Research and integration with interdisciplinary units	All Year	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
4	Review above Access template Edit menu: cut, copy, paste, select all Justification and style	Introduction	Research and integration with interdisciplinary units	All Year	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
5	Review above Set margins and tabs Create folders and classify documents	Practice	Research and integration with interdisciplinary units	All Year	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

Elementary Desktop Publishing Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology	
2	Type text, alter text (font, size) choose graphic, spell check, save, print Text menu: size, font	Introduction	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
3	File menu: new, open, close, save as, print, save. Edit menu: undo Spell check	Introduction	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
4	Review above Access template Text menu: font, alignment, style	Introduction	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
5	Review above Margins and Tabs	Demonstrate introductory skills	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

Elementary Multimedia Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology	
2	Organize multimedia stack, create text, add transitions, add buttons	Exploration	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
3	Organize multimedia stack, create text, add transitions, buttons, record sound	Exploration	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

4	Organize multimedia stack, import images from various sources	Implementation	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
5	Review above	Application	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

Thornapple Kellogg Middle School

Middle School Technology Usage Benchmarks				
Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation
6 & 7	TLW understand general laws associated with technology usage and become increasingly aware of the use of technology in career areas.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
6, 7, & 8	TLW respect everyone's work while using/sharing school technology	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
8	TLW understand the unlawfulness of plagiarism in all media forms for all content areas.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards

Middle School Word Processing				
Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation
6	TLW demonstrate the ability to cut and paste, change justifications, tabs and margins.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
6	TLW demonstrate the ability to create columns, import graphics and vary the fonts.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
7	TLW review all previously used features, especially features of which current projects require mastery.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
7	TLW demonstrate the ability to change justification, tabs and margins.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
8	TLW use spell check, change font size and style, manipulate spacing, make bulleted lists, and cut and paste text/graphics	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards

8	TLW demonstrate the ability to combine the skills learned in 6 th and 7 th grade to create a newspaper in Microsoft Word.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards
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Middle School Desktop Publishing Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation
6	TLW use desktop publishing software to create a brochure, poster, flyer or other informational document.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
6	TLW demonstrate the ability to import graphics and vary the format of document.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
7	TLW use desktop publishing software to create a curriculum related project.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
7	TLW demonstrate the ability to use Inspiration to take notes on articles. Demonstrate the ability to create a family tree using Inspiration. Demonstrate the ability to organize their thoughts using Inspiration.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards
8	TLW use desktop publishing programs to create curriculum related projects.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
8	TLW create various presentation materials using Publisher. Create a web page using Publisher.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards

Middle School Multimedia Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
6	TLW create a multimedia presentation.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming

7	TLW create a multimedia presentation.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming
7	TLW effectively navigate the Hyperstudio environment.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	
7	TLW demonstrate the knowledge of the various tools in the Hyperstudio environment.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	
7	TLW demonstrate the ability to create individual cards using the various tools found in Hyperstudio	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	
7	TLW demonstrate the ability to create a multi-card presentation having these cards linked together.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	United Streaming
7	TLW access the MOIS.org website.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	
7	TLW effectively navigate the Mpower environment Create a multi-slide presentation using Mpower.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	
8	TLW create a 10-slide presentation using presentation software that incorporates animation and transitions.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming
8	TLW effectively navigate the PowerPoint environment	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	
	TLW demonstrate the ability to create individual slides using the various tools found in PowerPoint.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	
8	TLW use the Internet to access information needed for a presentation.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	United Streaming
8	TLW demonstrate the ability to create a multi-slide presentation in PowerPoint.	Research and integration with interdisciplinary units	Marking Period	Interdisciplinary units developed to support Michigan State Standards	United Streaming

Middle School Database Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation
8	TLW create a simple database and manipulate it using database commands.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards

Middle School Internet Benchmarks

Grade	Curriculum Integration Goals	Application of Goal Examples	Timeline for Integration	MEAP Correlation
6, 7 & 8	TLW use the Internet and other media sources to collect information and pictures for classroom reports and project.	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards
6, 7, & 8	TLW effectively use the information to answer everyday questions or problems	Research and integration with interdisciplinary units	Year Long	Interdisciplinary units developed to support Michigan State Standards

Thornapple Kellogg High School

High School Business Information Technology Benchmarks						
Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
Computer Apps.	TLW use MS Word to create and edit a Word document	Beginning	TLW create an announcement by entering text, inserting clipart and formatting the document.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Computer Apps.	TLW use MS Excel to create a worksheet and embedded chart	Beginning	TLW create a worksheet by entering text and formulas; crating an embedded chart; and formatting the worksheet	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Acct. I	TLW identify, select, and apply the appropriate features of their software to complete a business simulation	Intermediate	TLW use software to complete Accounting cycle for “Blue Skies Outfitter”	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Acct. I	TLW read and execute information derived from an instruction manual	Intermediate	TLW use software to process information for “Foreign Exchange Translation Service”	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Acct. II	TLW import and export data to assist in financial analysis	Advanced	TLW use software to calculate ratios and percentages for financial analysis	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Acct. II	TLW input, store, query, retrieve, and sort data	Advanced	TLW use software to complete “Southgate Hardware” business simulation	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Admin. Services	TLW file in alphabetic, numeric, chronological, geographic and by subject electronically	Beginner	TLW use MS Office to create, format and print file entries in a table format.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Admin. Services	TLW compose and proofread business documents in appropriate formats	Beginner	TLW will use MS Office to create, format and print documents in appropriate format.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Advanced Computer Apps.	TLW use desktop publishing software to design ads	Intermediate	TLW use a commercial grade desktop publishing program.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

Advanced Computer Apps.	TLW use multi-media software to design interactive presentations	Intermediate	TLW use software to design a project to used by another user.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Marketing	TLW use computer software to develop advertisements	Intermediate	TLW use MS Publisher or Adobe Pagemaker to create print advertisements promoting Tourism in the US	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Marketing	TLW use computer software to create Sales Training Manual	Beginner	TLW use MS Office to create, format, and design a generic Sales Training Manual which could be used to train employees of any sales field.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
M.O.U.S. Certif.	TLW prepare for the Microsoft Office Specialist Word 2000 Core Exam	Intermediate	TLW use MS Office and SAM 2000 Net-Ready Skills Assessment Manager software	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
M.O.U.S. Certif.	TLW prepare for the Microsoft Office Specialist Excel 2000 Core Exam	Intermediate	TLW use MS Office and SAM 2000 Net-Ready Skills Assessment Manager software	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Website and Graphic Design	TLW design a website	Intermediate	TLW use a dedicated website design software package.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Website and Graphic Design	TLW design a video	Intermediate	TLW use video design software.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Music Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
Band and Choir	Creating music CD's from mp3 files stored on network drive	Beginner to Intermediate	Compile recordings of concerts performed throughout the year on one CD.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Jazz Band	Same as above, add: Create improvisation practice tracks using Band in a Box.	Beginner to Intermediate	Tracks can be used to practice solo sections of tunes we are performing.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Foods and Nutrition Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
Foods And Nutrition	TLW access the internet and locate the teachers website	Beginning	Using the teachers website to view nine weeks lesson plans and follow the rubrics for each nine week project	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Foods And Nutrition	TLW access the internet for research TLW use word processing, and publisher	Beginning	Using these tools, they will design and develop a Cookbook Project	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Foods And Nutrition	TLW access the internet for research TLW use PowerPoint, for a presentation	Intermediate	Using this, they will create a presentation on food related careers, food illnesses, supplements, and other dietary issues	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW access the internet for research TLW use Excel, and Projection Machine	Intermediate	Using this they will create a nutritional profile of their eating habits and analyze life expectancies.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Physical Education Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
	Internet research on basic elements of the PE curriculum. Ex. Rules, nutrition, fitness programs	Beginner	Research health and nutrition for personal goal setting and dietary analysis	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

	Create VCD demonstrating the various activities in LTS class. Provide a video documentary of the “TK Packers”	Advanced	Video documentary to be displayed for participants and interested members of the community.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	Utilize computer software to store, analyze and report data to students. Use video tools to develop a demonstration of our program for community use.	Intermediate	Data collection and reporting for monitoring progress and program development.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Advanced PE	Utilize the internet to compete in a state-wide “Cyber Challenge”	Intermediate	State-wide strength competition via the internet. “Cyber Challenge”	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Foreign Language Department Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
French and Spanish 1-4	Cultural Project (research cultural traditions or research the biography of a famous person from the target culture.)	Intermediate	*Research paper on the biography of a famous person with a minimum of 2 sources from the internet.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
French and Spanish Level 2	Travel Brochure Project (research geographical locations and travel facts via the internet.)	Intermediate	*Research geographical and travel facts about locations in target culture via the internet and create a brochure which organizes the information.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
French and Spanish Level 1-4	Current Events Report	Intermediate	*Using the internet to research weather conditions at a given time and date in the target culture, organizing the information into a weather forecast broadcast, and videotaping the broadcast.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

<p>French and Spanish</p> <p>Level 1-4</p>	<p>Plan a Trip Using Internet Resources</p>	<p>Intermediate</p>	<p>*Level 1: Plan a vacation to a specific location in the target culture. Given \$1500 with which to work, students must plan lodging, transportation arrangements, entertainment, and food by obtaining real and current information on the internet.</p>	<p>Year Long</p>	<p>Interdisciplinary units developed to support Michigan State Standards</p>	<p>United Streaming video downloads</p> <p>Television Access Channels</p>
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High School Industrial Arts Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
Principles Of Tech.	Demonstrate and perform related activities in: Physical Technology Bio-Related Technology Info. Technology	Intermediate	Programming CNC Equipment. Producing a Multi-Media project. Producing a 3D animation project.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Woods	Demonstrate the safe use of equipment. Demonstrate the use of teamwork.	Beginning	Perform various tasks necessary to build a project. Perform a mass production project.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Drafting	Demonstrate Geometry for Technical Drawing. Develop Multiview Drawings.	Intermediate	Using CAD to create the correct geometry. Using CAD to produce a multiview drawing.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Social Studies Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
AP History	Video presentation of American Culture 1950-1974	Advanced	Videotaping and video editing	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	Newspaper on Progressive Years	Intermediate	Page Maker/Microsoft Word/Microsoft Publisher	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	Research Paper Causes of the Civil War. Impact of Great Depression and WWII on Americans	Beginner	Internet Search Microsoft Word	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

	TLW develop basic video editing skills. TLW apply video editing skills to create a student presentation	Beginner	Create campaign commercial for presidential campaign. Create video example to illustrate the roles of the president	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	Create & track an investment portfolio (stocks)	Beginner	Students spend "\$10,000" on 4-6 stocks each and track performance over a few months	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	Research global challenges Create a website on one of the global challenges facing our world today	Beginner/Intermediate	TLW research global issues using quality websites given by the teacher, then create their own website on the topic and propose their solution to the challenge	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
WORLD EVENTS	Create a multi-media presentation regarding the challenges on an assigned African country	Beginner/Intermediate	Students research on an assigned African country. They then create a multi-media presentation introducing the country and the challenges the country faces.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Law	Improve information sharing between students Improve technology skills of students	Intermediate to Advanced	Consumer Awareness Project: Video production, Pamphlet, Comparison shopping graphs and charts using internet, and PowerPoint presentations.	Consumer Unit	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Government "A"	Improve student performance Improve technology skills of students	Intermediate to Advanced	Presidential campaign: Create audio and video commercials, Use computers to create public opinion polls, Create spreadsheets and graphs with pertinent materials	Presidential Unit	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Government "B"	Improve information sharing between students and staff Improve technology skills of students	Intermediate to Advanced	Car Buying Project: Use internet sites to gather information on new cars, trade-in values, financing,	Car Buying Unit	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

			holdbacks, etc... Prepare PowerPoint presentation			
	TLW gain a better understanding of the Renaissance and Reformation time periods by successfully completing a <i>digital/analog</i> recording project	Beginner	Student will be given two class periods to record a digital/analog tape project with the following rubric (see attached form). This can be done on a cd.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW create campaign commercials for the office of Governor or President	Intermediate	TLW use digital cameras and camcorders along with Movie Maker to produce a 60 sec. commercial	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use the Internet to research different forms of government.	Beginner	TLW use the internet to search for various forms of government that exist through out the world.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use the internet to locate places through the world using coordinates	Beginner	TLW use the internet website that use longitude and latitude to help student determine exact location	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

	TLW will create a travelogue about a fictional trip through Europe	Intermediate	TLW use internet, digital cameras and camcorders along with Movie Maker to produce a 3 minute travelogue.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
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High School Science Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
	TLW will use various software to create learning tools and to present information.	Intermediate	TLW use Powerpoint and Toolbook to relay information about heredity, dichotomes, land formations, etc.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use software to create diagrams and images.	Beginning	TLW use WEB 3D and Webpainter to create models/images/diagrams of atoms, molecules, matter, and/or landforms.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use instruments to collect data.	Beginning	TLW use new instruments to collect data: thermometer, power source, voltmeter, ammeter, etc.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

	TLW use GAX to make and analyze graphs.	Beginning	TLW use Graphical Analysis to plot distance, time, speed and acceleration and analyze relationships	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW will use various software to access information.	Intermediate	TLW use these cd's, "Wide World of Animals", "Compton's", and "Red Shift", to learn more about biomes, climates, photosynthesis, and astronomy.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use GIS software to analyze data and collect information	Beginning	TLW use the ESRI/GIS software (ARCVIEW) to gather information about the United States and to analyze data collected at Moe Road.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use instruments to collect data.	Beginning	TLW use new instrument (Tangent Height Gauge, Densitometer, Soil Moisture Meter, etc.) to collect data at Moe Road.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

	TLW use a computer program to gather information	Intermediate	TLW use a Toolbook program to gather information about the Nitrogen Cycle.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use GAX to make and analyze graphs.	Beginning	TLW use Graphical Analysis to plot distance, time, speed and acceleration and analyze relationships.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use the Internet to research and gather information.	Intermediate	TLW use the Internet to gather information about technological advancements in Astronomy.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use various software to access information	Beginning	TLW use CD's to research specific chemistry topics for earend project	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW demonstrate the ability to use the computer to chart graph lab results	Beginning	TLW will use Microsoft excel to analyze periodicity in the periodic table	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

	TLW demonstrate the ability to use the TI-92 calculator to show graphical relationships, collect and store data, and use CBL interface units	Beginning	TLW perform kinetics experiment and determine the order of a reactant via CBL interface and TI-92 calculator	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW demonstrate the ability to use a variety on instrumentation including and not limited to pH meters, digital scales, spectrophotometer-20, etc.	Beginning	TLW use the pH meters and the Spect 20 in the aforementioned experiments	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use the internet to research biological topics	Beginning	TLW research topics such as cloning, stem cells, biomes, and ecosystems to prepare research projects, presentation, and debates.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use the compound light microscope to view organisms at the microscopic level	Beginning	TLW view leaf structure, unicellular organisms, stages of mitosis, etc.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use software applications to create presentations and reports	Beginning	TLW use software tools such as Microsoft Word, PwerPoint, and Excel	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	TLW use computer projection devices to display pictures, diagrams, and videos from the monitor	Beginning	TLW use this application in presentations and debates	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Language Arts Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
English 100	TLW use appropriate presentation media for an Electronic Portfolio	Beginning	TLW present 2 sample essays in HTML format with appropriate links	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
English I (ninth grade)	TLW use appropriate presentation media for an Electronic Portfolio. TLW use research tools.	Beginning	TLW present 4 sample essays in HTML format with appropriate links. TLW use infotrak to research Shakespearian time.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
English II (tenth grade)	TLW use appropriate presentation media for an Electronic Portfolio. TLW use research tools and assess authenticity of data and authority of sites.	Intermediate	TLW present 4 sample essays in HTML format with appropriate links. TLW use infotrak and search engines to research Roman	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

			era.			
American Lit	TLW use appropriate presentation media for an Electronic Portfolio. TLW use research tools.	Beginning	TLW present 4 sample essays in HTML format with appropriate links. TLW use infotrak to research American novels.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Journalism	TLW complete all newspaper layouts in a setting that allows maximum oversight, order and instruction while using state of art programs.	Intermediate	TLW produce student newspaper in timely fashion.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Yearbook	TLW complete all yearbook layouts in a setting that allows maximum oversight, order and instruction while using state of art programs.	Advanced	TLW produce student Yearbook in timely fashion Year book.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Novels	TLW use appropriate presentation media for an Electronic Portfolio. TLW use research tools.	Intermediate	TLW present 4 sample essays in HTML format with appropriate links. TLW use infotrak to research background to novels.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Theater	TLW use appropriate presentation media for an Electronic Portfolio. TLW use research tools.	Intermediate	TLW present sample essays in HTML format with appropriate links. TLW use infotrak and search engines to research settings to plays.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Creative Writing	TLW use appropriate presentation media for an Electronic Portfolio.	Intermediate	TLW present sample works in HTML format with appropriate links.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Shakespeare	TLW use appropriate presentation media for an Electronic Portfolio. TLW use research tools.	Intermediate	TLW present sample work in HTML format with appropriate links. TLW use infotrak and search engines to research settings to plays.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Math Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
	Use calculators to perform mathematical computations	Beginner	Finding the percent of a number. Mean, Median, Mode Solving Proportions Finding the perimeter of a figure	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

			Finding the area of a figure.			
	Use various internet sites to reinforce concepts.	Beginner	Percent of a number Mean, Median, Mode	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Integrated Math 2	Use calculators to perform mathematical computations.	Beginner	Finding percent change of the price of gas during a week. Solving proportions. Finding missing sides of right triangles.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Integrated Math 2	Use calculators with large and small numbers.	Beginner	Students learn how to write numbers in scientific notation.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Algebra	Find lines of best fit on graphing calculator.	Intermediate	Given data, find an equation that would best represent the data. Enter data and use calculator functions properly to find slope and y-intercept.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
AP Calculus	Students will put programs on their calculators via a link and use these programs to perform various tasks.	Intermediate	Approximating a definite integral using the trapezoidal rule Quadratic formula	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
AP Calculus	Students will use "built in" programs on their graphing calculators to solve problems.	Intermediate	Finding zeroes Finding points of intersection.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

Functions, Statistics, and Trigonometry	TLW explore functions, sequences, series, and limits with a graphing calculator.	Beginning	Finding limits. Examine properties of functions, sequences, and series.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Functions, Statistics, and Trigonometry	TLW compare and contrast data properties.	Beginning	Finding mean, median, mode, range, interquartile range, quartiles, and standard deviation. Create graphical displays of data. Finding lines of best fit for a data set. Making predictions from data.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Functions, Statistics, and Trigonometry	TLW run probability simulations.	Beginning	Use of a random number generator. Estimating probabilities through simulation.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Computer Science Benchmarks

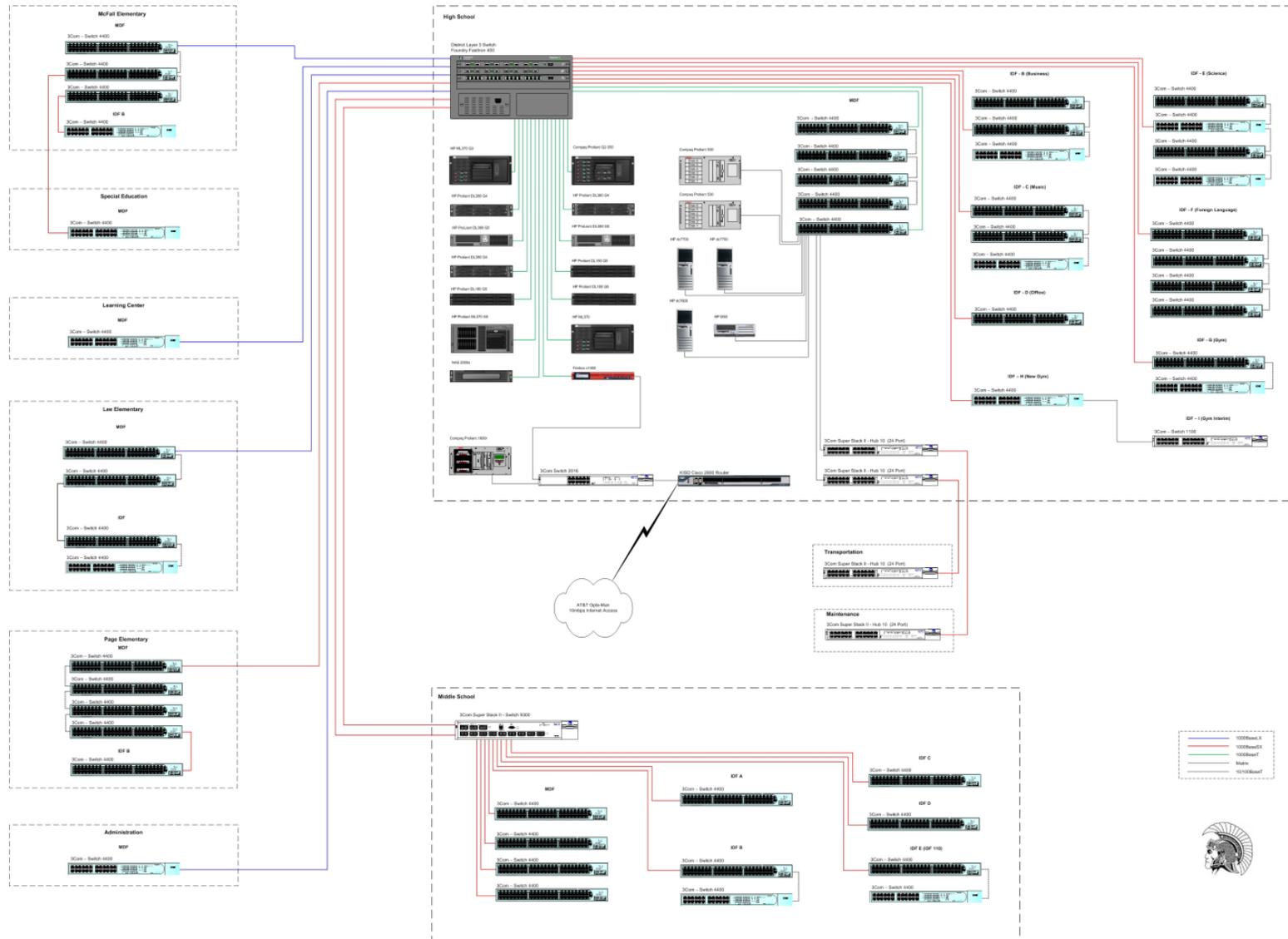
Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
	Use Visual Basic software to program	Intermediate	Students will write programs to achieve various tasks.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
	Use JAVA software environment Blue J to program in the language of JAVA	Intermediate	Students will write programs to achieve various tasks.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

High School Special Education Benchmarks

Course	Curriculum Integration Goals	Level of Competency	Application of Goal Examples	Timeline for Integration	MEAP Correlation	Distance Learning Technology
Sp. Ed English	TLW will write and illustrate a story	Beginner	TLW will use PowerPoint to present the story to the class.	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels
Sp. Ed Social Studies	TLW will use programs such as Mapping CD's and Web Quests	Beginner	TLW use this information to produce a newscast	Year Long	Interdisciplinary units developed to support Michigan State Standards	United Streaming video downloads Television Access Channels

Appendix C – Wide Area Network Diagram

Thornapple-Kellogg Public Schools
Logical Network Topology



Appendix D – Acceptable Use Policy: Staff

Staff AUP

Computer Network Agreement

Any staff member who becomes aware of student or staff network use in violation of the district's acceptable use rules shall refer the incident to the building principal and system administrator for action, who may remove the student or staff member from the network or take other appropriate actions.

System Integrity and Security

Computer file servers containing student records, employee records, or other sensitive administrative documents shall be maintained on an independent network separated by an electronic "firewall" from unauthorized access by outside entities, including student users. If dial-in access is permitted to this equipment, that number will not be published.

All users, particularly staff, shall be instructed in password security. Staff passwords shall be changed every three months.

No user in a district building should leave a computer which is logged on to the network unattended, and all users should promptly report any suspected breach of security or data integrity to the system administrator.

Limiting Access

School servers may incorporate blocking and filtering software. Additional sites may be blocked by the system administrator in response to a complaint by a student, staff member, Board member or parent in accord with the district's procedures on controversial material.

E-mail sites which deposit unsolicited, bulk, chain, or offensive messages on the district server will be blocked. System administrators may also block e-mail following a complaint from any user. Time permitting, an effort will be made by the system administrator to notify the offending system operator of the violation and the district's desire not to be contacted in the future. ~ system administrator shall refer repeated violators, along with any case of solicitation for child abuse or other illegal act, to the superintendent for action in concert with law enforcement authorities.

Use of Computers in a School District Library

The Board pursuant to state statute requires when a school district library offers use of the Internet or a computer, computer program, computer network, or computer system to the public, that access to minors be restricted in the following manner:

By utilizing a system or method that is designed to prevent a minor from viewing obscene matter or sexually explicit matter that is harmful to minors. To accomplish this, a library may use passwords and/or filters that restrict Internet access for those under 18 years of age.

Use of the computer network is a privilege, not a right. The fundamental rule for use of district computer network resources is that all use must be consistent with the district's educational goals and behavior expectations. Because electronic communications are so varied and diverse, these rules do not

attempt to enumerate all required or proscribed behavior by system users. Users are expected to use common sense and adhere to the norms of behavior in the school community. In particular, users should:

- Be polite and courteous in all communications and language.
- Assist others in the use of the system, and help others who are looking for ideas or information.
- Post and share information which is interesting and helpful to other users.
- Always use the network as a resource to further their own education and that of others.
- Be mindful of network security, and immediately report any bugs, errors, or security problems to the building principal and system administrator.

Users may not:

- Use the district equipment for anything contrary to law, or to solicit others to break any law.
- Illegally copy, send, or distribute any copyrighted software, work, or other material.
- Send, publish, download, access, or retrieve any communication or material which may be defamatory, abusive, obscene, profane, sexually explicit, threatening, racially or ethically offensive, harassing, or illegal, or anything which violates or infringes on the rights of any person.
- Use the network for any commercial purpose or financial gain.
- Use the network for any advertisement or solicitation without approval from the superintendent.
- Access, attempt to access, modify, or delete any record or file without permission or authorization.
- Make any attempt to harm or destroy the data of any other user or any system on the network, including creating or sending computer viruses, Trojan horses, or similar computer code.
- Use electronic mail to send unsolicited, bulk, chain, harassing, anonymous, or other messages which are commonly considered an annoyance to recipients or degrade system performance.
- Use vulgarity, obscenity, or swearing in messages or electronic postings, or send email/message “flames” or other attacks.
- Attempt to access material or sites which are blocked by the district, or attempt to use the network while access privileges are suspended.

I have read and agree to the above.

Signature

Date

Note — This information was taken from Board Policy EFA-R Computer Network

Appendix E – Acceptable Use Policy: Students

HS, MS and Elementary Student AUP

Conduct Code for Use of Computer Technology

All computers, peripheral equipment, software and accessible information at Thornapple Kellogg High School will be used exclusively to enhance and add value to the educational experience of the students, staff and community.

User Agreement:

1. I will not engage in any abusive conduct that could result in damage to the computer equipment or data. **I will treat the equipment with respect and care.** I know that abusive conduct includes, but is not limited to, the following: loading or downloading illegal or improper files, modifying without authorization software or hardware, and installing viruses or data or programs that are harmful to any aspect of the computer system. I also agree not to harass others or use objectionable language.
2. I understand that the system administrators reserve the right to monitor and to delete any data/software loaded on a computer system or saved on diskettes that are property of the Thornapple Kellogg Schools. I also understand that the system administrators reserve the right to limit or to deny access to the computer system if the rules are not obeyed.
3. I agree that school assignments have priority. I agree to limit my use of the computer system to 20 minutes if others are waiting to use the equipment. I also agree to limit printing to 15 pages unless I have the permission from the system administrator to exceed this amount. I understand that Internet use is for educational purposes only and at the discretion of the teacher.
4. I will not duplicate for private use, or for my personal gain, any software or files owned by the Thornapple Kellogg Schools. I will uphold copyright laws.
5. I agree that the use of a password is limited to the person assigned that password. Unless I have permission, I will not access, alter, or delete any files that are not mine.
6. In exchange for the privilege of using Thornapple Kellogg computer technology, I grant Thornapple Kellogg Schools and Thornapple Kellogg administrators and employees a discharge from all obligations and/or claims that may occur as a result of my use or misuse of the computer technology.
7. I adhere to any additional regulations that the systems administrators may implement.
8. I will not enter into or participate in any type of chat room or instant messaging nor will I open, read, or send email or log into any email system during the school day. (If an unusual circumstance arises, a staff member may, at his/her discretion, allow a student limited access to that student's email.)

9. Students found guilty of vandalism may lose network privileges and be subject to criminal prosecution. Parents and/or guardians are financially responsible for acts of vandalism committed by their children. Vandalism is defined as any malicious attempt to harm or destroy data or hardware.

10. Thornapple Kellogg Schools makes no warranties of any kind, whether expressed or implied, for the services it is providing. Thornapple Kellogg will not be responsible for any damages suffered, including loss of data resulting from delays, or service interruptions caused by the school's own negligence or the user's errors or omissions. Use of any information obtained via our network is at your own risk. Thornapple Kellogg Schools specifically denies any responsibility for the accuracy or quality of information obtained through its services.

This agreement must be signed and returned.

I have read and understand this agreement. I will abide by this agreement.

Signature of user

Date

Signature of Parent or Guardian

Date

Appendix F – USF E-Rate Requested Products and Services

Thornapple Kellogg Schools

USF E-RATE REQUESTED PRODUCTS AND SERVICES
(FY09: 2009-2010)

TELECOMMUNICATIONS SERVICES

All Telephone Service

Thornapple Kellogg Schools has an existing E-Rate qualified contract for basic telephone service with Jas Networks beginning July 1, 2012 through June 30, 2015.

INTERNET ACCESS

Internet Access Service

Thornapple Kellogg Schools has an existing E-Rate qualified contract for Internet Access with AT & T beginning July 1, 2012 through June 30, 2015.