

SAGINAW TOWNSHIP COMMUNITY SCHOOLS

District Code: 73040
3465 N. Center Road Saginaw, MI 48603
Phone: (989) 797-1800, ext. 528 Fax: (989) 797-1801
Saginaw Intermediate School District

DISTRICT TECHNOLOGY PLAN

July 1, 2003 - June 30, 2006

www.stcs.org

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REVISED 2003

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Phone: (989) 797-1800 Fax: (989) 797-1801

Superintendent: Dr. Jerry Seese

DISTRICT TECHNOLOGY COMMITTEE 2002-2003

Mary Bottke - Heritage High School Teacher

Christine Brakenberry – Sherwood Elementary Teacher

Steve Carbeno – Network Administrator

Nancy Cotcamp – Board of Education

Jeff Dice - Heritage High School

Arica Duran - Arrowwood Elementary School

Annette DuRussel - Heritage High School Teacher

Bonnie Eaves – Middle School Assistant Principal

Marsha Eckerman – Heritage High School Media Specialist

Steve Elliott – Director of Community Services

Brad Fechter – Heritage High School Teacher

Bobbi Gordon – Communications and Technology

Jeff Johnson – Saginaw Intermediate School District

Mike Jury – Board of Education

Frank Lukowski - Heritage High School Assistant Principal

Linda Marr – Weiss Elementary Teacher

Sue May – Director of Curriculum, Instruction, Assessment

Torre McCarthy – Heritage High School Teacher

Jim Mitchell – Information Technology Manager

Nancy Nelson – White Pine Middle School Media Specialist

Kay Packwood – Arrowwood Elementary Principal

Noelle Palasty – Plainfield Elementary Teacher

Hank Pletscher – Saginaw Valley State University

Tom Rybak – Westdale Elementary Teacher

Mary Smith - White Pine Middle School Teacher

Sue Stark – Hemmeter Elementary Teacher

Kevin Vieau – Weiss Elementary Teacher

District Mission

In pursuit of excellence, the Saginaw Township Community Schools' mission is to educate, guide, and challenge all students to develop lifelong learning skills necessary to successfully contribute and compete in a rapidly changing global community.

Introduction

Saginaw Township Community Schools has a student population of approximately 4760 in a K-12 program housed in six elementary schools (K-5), one middle school (6-8), one high school (9-12), and one adult alternative education program. The K-12 teaching staff numbers 300 with an average salary of \$54,600. The annual operating budget of the district is approximately \$36,800,000 about \$6,700 per student.

The district provides transportation for any student who lives more than one and one-half miles from the school site. In addition, the school system includes Adult, Alternative, and Community Education. The district works cooperatively with other school districts providing students the opportunity to participate in the Saginaw Career Complex and the Center for the Arts and Sciences.

The following are the schools that make up the Saginaw Township Community Schools District:

Arrowwood Elementary School (K-5)

5410 Seidel Road (989) 797-1835 • FAX (989) 799-5140

Hemmeter Elementary School (K-5)

1890 Hemmeter Road (989) 797-1832 • FAX (989) 797-1854

Plainfield Elementary School (K-5)

2775 Shattuck Road (989) 799-7630 • FAX (989) 797-1855

Sherwood Elementary School (K-5)

3870 Shattuck Road (989) 799-2382 • FAX (989) 797-1856

Weiss Elementary School (K-5)

4645 Weiss Street (989) 793-5226 • FAX (989) 797-1857

Westdale Elementary School (K-5)

705 S. Center Road (989) 797-1827 • FAX (989) 797-1858

Mackinaw Academy, Adult Alternative Education

3870 Shattuck Road (989) 799-8470 • FAX (989) 790-6595

White Pine Middle School (6-8)

505 N. Center Road (989) 797-1814 • FAX (989) 797-1859

Heritage High School (9-12)

3465 N. Center Road (989) 799-5790 • FAX (989) 799-5159

District School Improvement: Goal #2:

All students will demonstrate proficiency in the use of all areas of technology.

Beliefs for Technology Integration

Learning in the 21st Century

The following requirements were identified for learning in the 21st Century:

- A greater dependence on new communication and computing technologies that support new levels of student and educator creativity and research
- A change in the role of educators from “sages on the stage” to mentors, researchers, publishers, technology users, knowledge producers, risk takers and lifelong learners
- Involvement of parents to play a major role in the education of their children and to work actively with educators to connect formal and informal education
- Partnering of local businesses and other community organizations so they become actively involved in the schools
- Collaborations that bring students, educators, and researchers together to create new curriculum for pre-K, K- 12 learners, and adult learners

Building Schools of the Future

The following conditions were recognized as critical elements of future schools:

- Schools of the future must be open and flexible, focusing on learning
- New communication should promote new collaborations and a higher level of cooperation and creative problem-solving
- Educators must be supported in their use of new technologies for learning and also in their use of technology for professional development and collaboration
- Learners (students, educators, parents, etc.) must be able to use technology to achieve new levels of learning and to acquire new information age skills and abilities
- Educational managers need to use technology as a tool for managing schools and learner communities
- Free from one geographic location: anywhere, anytime, anyplace
- Supportive of all learning styles
- Educators must be researchers and mentors
- New skills required in info-society: abilities to quickly adapt to new situations and new technologies and to be able to process vast amounts of information
- All staff members must be receive adequate training and support to effectively use the technology
- Principals, superintendents and school boards need to understand how the current structure of a educator’s and learner’s day impact on their effective use of the technology. In effect, managers must provide the vision of change that includes empowering teachers and learners in new ways and then must learn how to effectively manage these empowered educators and learners.
- New on-line communities

Exit Outcomes for Technology

Students will able to use technology in an ethical manner to:

1. Communicate globally

Students will use appropriate resources to communicate with others (e-mail, chat, video conference, etc.)

2. Locate information

Students will use appropriate resources (library, Internet, CD-ROM, laser disc, simulations, videos, etc.) to locate information.

3. Gather research data

Students will use research skill to investigate specific topics using various media, e.g. CD-ROM, (Internet, laser disc, etc.)

4. Organize information

Students will organize knowledge by using keyboarding, word processing, database, spreadsheet, etc.

5. Utilize decision making

Students will make decisions to effectively present the information they have researched and the knowledge they have organized.

6. Produce presentations and projects

Students will organize research into a multimedia format to communicate information.

7. Evaluate presentations or projects

Students will critically review, assess, and revise presentations and projects.

PROFILES

STCS's plan will utilize the following profiles as a guide to maintain a productive direction with technology in its efforts to improve learning. STCS will strive toward making these profiles an identifiable trademark of our school district.

PROFILE #1: LEARNERS

FLUENCY:

The student and staff are proficient using technology and communication networks for whatever endeavors they choose.

STRENGTHENING THE BASICS:

The use of technology makes it possible for the student and staff to learn the basics with more depth and understanding.

DEVELOPING HIGHER LEVEL SKILLS:

This use of technology makes it increasingly possible for the student and staff to engage in learning practices that lead to new ways of thinking, understanding, constructing knowledge and communicating results.

INCREASING RELEVANCY:

The student and staff are using contemporary technology, communication networks and associated learning contexts to engage in relevant, real-life applications of academic concepts. Their work parallels the way in which professionals use technology.

MOTIVATION TO LEARN:

The quality access to technology and telecommunications is increasing the intrinsic motivation of the student and staff to learn.

RECOGNITION OF TRADEOFFS:

The student and staff are cognizant of the tradeoffs inherent in the application of technology in society as they makes life choices in a global, technological society.

PROFILE #2: LEARNING ENVIRONMENTS

LEARNING CONTEXT:

Educators and students are establishing a learning context that requires and enables them to use contemporary tools to research issues, solve problems and communicate results, both individually and in teams.

LEARNING CONTENT:

The standards, curriculum, instruction and assessment reflect the knowledge-based, global society of today. Educators are reflecting societal changes in school practice.

SCHOOL CULTURE:

The school culture is one that encourages, enables and rewards educators individually and collectively to improve the learning and teaching processes through the effective use of technology and communication networks.

TECHNOLOGY ACCESS:

Educators and students have sufficient access to productivity tools, online services, media-based instructional materials, and primary sources of data in settings that enrich and extend their learning goals.

INFORMATION AND COMMUNICATION:

The learning environment is a place where the effective use of information and communication technology is modeled for and by students.

PROFILE #3: PROFESSIONAL COMPETENCY

CORE TECHNOLOGY FLUENCY:

The staff are proficient, knowledgeable and current with contemporary technology.

CURRICULUM, LEARNING AND ASSESSMENT:

The educator's fluency with technology has translated into unique learning opportunities for students. The educator's knowledge about technology's impact in her/his field of study is reflected in the context of her/his students' learning.

PROFESSIONAL PRACTICE AND COLLEGIALLY:

Educators are using technology and communication networks to advance their professional practice. Educators are knowledgeable and current with the technology and its impact in their field of study and the larger society.

CLASSROOM AND INSTRUCTIONAL MANAGEMENT:

Through their use of technology and telecommunications, educators are creating learning contexts that require students to take on more independent roles in their own learning.

PROFILE #4: SYSTEM CAPACITY

VISION:

The system has engaged key stakeholders plus the broader community in defining and clearly stating a compelling vision and clear expectations for technology in schools. The entire system is committed to that vision.

LEADERSHIP AND PLANNING:

The system has developed a comprehensive plan. Alignment exists between the plan for technology in schools and existent policies and practices (e.g., rules and regulations, fiscal priorities, operating practices, allocation of resources, investment in human capital and accountability).

ENSURING CAPACITY:

The system has ensured that educators, communities, and components of the system itself have the capacity to translate that vision into compelling, meaningful learning activities for children, youth, and adults.

SYSTEMS THINKING:

The vision for improved learning through technology is a design factor across the entire education system.

PROFILE #5: COMMUNITY CONNECTIONS

COMMITMENT:

Key community stakeholders are committed and involved in planning, funding, implementing, and evaluating the system's use of learning technology.

COLLABORATION:

The system has identified and acted on the full range of mutually beneficial partnerships, exchanges, and collaborations.

CLARITY:

All technology partnerships, exchanges, and collaborations include clear articulation of expectations, implementation plans, time lines, and accountability systems.

COMMUNICATION:

There are mechanisms for ongoing communication among partners and the broader community to celebrate successes, track progress, build awareness, and involve new partners and citizens in the process.

PROFILE #6: TECHNOLOGY CAPACITY

INSTALLED BASE:

Schools have an installed base of modern technology equipment to support the learning, communication, and administrative goals of the education system.

CONNECTIVITY:

The connectivity in the school/district is adequate to support current and rapidly growing demands created by the learning, communication, and administrative requirements of the education system.

TECHNICAL SUPPORT:

There is adequate technical support to provide timely, expert troubleshooting, technical assistance, ongoing maintenance, operation, and upgrades.

FACILITIES:

The facilities within the system are “technology-ready.”

PROFILE: ACCOUNTABILITY

DELIVERABLES AND BENCHMARKS:

Clear goals have been set, accompanied by logical implementation and change strategies, measurable objectives, and associated metrics.

DATA COLLECTION/INTERIM PROGRESS:

A well-designed data collection and analysis process that tracks progress, leads to data-driven decision making, and provides evidence as to whether or not the intervention leads to the goals.

DATA-DRIVEN DECISION MAKING:

The data analysis is appropriately informing and contributing to the continuous improvement of the implementation.

COMMUNICATION:

A communication plan is in place that keeps all stakeholders informed and provides a feedback mechanism for continuous improvement.

DISTRICT TECHNOLOGY OVERVIEW

INFRASTRUCTURE

STCS completed wiring all classrooms and offices in 6 elementary schools, White Pine Middle School, and Heritage School for voice (phones), data (computers), and video (cable). This project began in March of 1997 and was completed in the summer of 1999. Voice mail was added to all classrooms and offices last year. All of our buildings have email capability through Groupwise. All staff have email access.

Building and Grounds, Food Service, and Transportation buildings are connected via a wireless network. There is on-going development and refinement for connectivity and network design for the WAN, LANs, Internet, and Intranet.

DISTRICT COMPATIBILITY AMONG TECHNOLOGIES

STCS has carefully investigated and chosen a networking platform (Novell 5.0) specifically because of the need for interoperability among components. All elementary, middle school, and high school labs have IBM compatible computers. The Novell network provide staff and students to access technology seamlessly.

The school labs operate on Windows 95. Recent upgrades provide Windows ‘98.

STCS Technology Use Agreements, Internet Acceptable Use Policies, and Web Authoring Agreements have been adopted and implemented. These documents address the use of all technologies by students, staff, and community members. In addition, a board policy for Internet filtering and Library access has been adopted.

INTERNET ACCESS

In coordination with the Saginaw ISD, STCS has a T1 connection for Internet access. Internet access is available to all buildings at each staff computer and in computer labs. Its intended use by staff, students, parents, and community members is defined in the STCS Internet Use Agreement. STCS has a webpage (www.stcs.org) on the district's webserver and posted on the Internet.

DISTRICT TECHNICAL ASSISTANCE

Over three year ago, STCS created two positions for technical support: IT Manager and Network Administrator. These positions have been filled and are providing excellent support and leadership.

DISTRICT PROFESSIONAL DEVELOPMENT

The STCS District School Improvement plan addresses professional development in Goal #2 Strategy #2-6:

- υ Provide on-going professional development activities.

The Technology Plan also addresses staff development in Action Items #7:

- υ Plan and implement technology staff development to support the curriculum.

To provide staff development, STCS has partnered with the Saginaw ISD. Several classes are offered during the school year in the area of technology. STCS provides many in-house opportunities for technology training. STCS provides all teachers with 1/2 day professional development time each month, many which are used for technology training. In addition, staff development opportunities lead by students is being explored.

FUNDING PLAN

The major source of funding for technology has come from the school district's general operating budget. Approximately \$384,000 has been specifically earmarked for technology. Approximately \$267,000 is spent on our Information Technology Manager, Network Administrator, and Technology Corrdinator positions. The remainder is pent on capital outlay and supplies. Additionally, each school spends money out of their building accounts and using parent group funds (approximately \$20,000 per year).

COLLABORATION

STCS collaborates as much as possible with surrounding school districts, Delta College, and Saginaw Valley State University. STCS works with educational service agencies in our community and across the state. STCS also collaborates with other service providers, business and industry, to enrich technology resources in our schools and enhance learning for all. STCS also works closely with the Saginaw ISD and its Technology personnel.

Through its Adult and Alternative Education Program at the Mackinaw Academy and through its Community Education Program, STCS is utilizing technology to provide adult literacy services, and

other educational opportunities for members of the community. Access to facilities, equipment, training, and information resources by the community is an important function for STCS.

COMMUNICATIONS/PUBLIC RELATIONS

In its effort to keep everybody informed about the direction of STCS in the area of technology, our goals and progress have been, and will continue to be highlighted in our publications and newspaper articles. We share what we are doing and our accomplishments, so others will get involved. Our district home page (www.stcs.org) is used to communicate our mission and direction of our plan. STCS also utilizes staff, student, and parent surveys to collect data and provide information.

DISTANCE LEARNING

Saginaw Township Community Schools, through a county-wide SAGINET network, has taken the lead in providing students with distance learning opportunities. Heritage High School is the source of a foreign language class which provides instruction to two other school districts via SAGINET. SAGINET carts are located at the high school and middle schools, and one cart is shared among the six elementary schools. Virtual field trips, instructional events, streaming digital video, and video-conferencing are being used by teachers and administrators.

PARENT COMMUNICATION

Saginaw Township Community Schools implemented a new Intergrated Student and Finance Manangement system several years ago. One of the key components that we wanted in the package we chose was parent access. That component allows parents to check student attendance (real time), semester grades, and discipline information via our web site. We will be adding a grading component so parents and students can access grades for daily work and tests. Additionally, voice mail and teacher web pages are available to staff for parent communication.

EVALUATION

Monitoring the technology plan as it is being implemented will provide valuable information for future planning. An evaluation will provide two kinds of important information. First, STCS will find out if the Technology Plan is being implemented according to the way it was originally intended. Second, STCS will carefully monitor what happens as the technology plan is implemented, and the real impact the ultimate success of the program.

Evaluation of the District Technology Plan will be the responsibility of the District Technology Committee. This committee is comprised of representatives from administrators, teaching staff, parents, and the community. The evaluation tool for the District Technology Plan will utilize the Seven Dimensions of Progress.

THE SEVEN DIMENSIONS OF PROGRESS

These questions from the “Technology in American Schools: Seven Dimensions of Progress” have been developed with educators in mind. These questions will be used as an prescriptive and evaluative tools to enhance and measure the progress of the use of technology in Saginaw Township Community Schools. These indicators are planned to improve teaching and learning. The following pages depict the Progress Rubric for each of the Seven Dimensions.

LEARNERS

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
<p>FLUENCY: Are learners proficient using technology and communication networks for whatever endeavors they choose?</p>				
<p>STRENGTHENING THE BASICS: Does this use of technology make it possible for the learner to acquire the basic skills with more depth?</p>				
<p>DEVELOPING HIGHER LEVEL SKILLS: Does this use of technology make it increasingly possible for the learner to engage in learning practices that lead to new ways of thinking, understanding, constructing knowledge and communicating results?</p>				
<p>INCREASING RELEVANCY: Are learners using contemporary technology, communication networks and associated learning contexts to engage in relevant, real-life applications of academic concepts?</p>				
<p>Does their work parallel the way in which professionals in the workforce use technology?</p>				
<p>MOTIVATION TO LEARN: Is quality access to technology and telecommunications increasing the intrinsic motivation of learners to learn?</p>				
<p>RECOGNITION OF TRADEOFFS: Are learners cognizant of the tradeoffs inherent in the application of technology in society as they make life choices in a global, technological society?</p>				

TECHNOLOGY CAPACITY

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
INSTALLED BASE: Do schools have an installed base of modern technology equipment (computers, calculators, digital cameras, projection devices, scanners, printer, etc.) to support the learning, communication, and administrative goals of the education system?				
CONNECTIVITY: Is the connectivity adequate to support current and rapidly growing demands created by the learning, communication, and administrative requirements of the education system?				
TECHNICAL SUPPORT: Is there adequate technical support to provide timely, expert trouble-shooting, technical assistance, ongoing maintenance, operation, and upgrades?				
CLIENT ORIENTATION: Are staff and student needs being met?				
Is there a high level of satisfaction?				
FACILITIES: Are the facilities within the system "technology-ready?"				
Do standards for facilities and infrastructure include technology requirements?				

LEARNING ENVIRONMENT

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
LEARNING CONTEXT: Are educators establishing a learning context that requires and enables students/student teams use of contemporary tools to research issues, solve problems and communicate results?				
LEARNING CONTENT: Do the standards, curriculum, instruction and assessment reflect the knowledge-based, global society of today				
DEVELOPING HIGHER LEVEL SKILLS: Does this use of technology make it increasingly possible for the learner to engage in learning practices that lead to new ways of thinking, understanding, constructing knowledge and communicating results?				
Are educators reflecting societal changes in school practice?				
SCHOOL CULTURE: Is the school culture one that encourages, enables, and rewards educators individually and collectively to improve the learning and teaching processes through the effective use of technology and communication networks?				
TECHNOLOGY ACCESS: Do educators and learners have sufficient access to productivity tools, online services, media-based instructional materials, and primary sources of data in settings that enrich and extend their learning goals?				
INFORMATION AND COMMUNICATION: Is the learning environment a place where the effective use of information and communication technology is modeled for and by students?				

PROFESSIONAL COMPETENCY

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
<p>CORE TECHNOLOGY FLUENCY: Are the staff proficient, knowledgeable and current with contemporary technology?</p>				
<p>CURRICULUM, LEARNING, AND ASSESSMENT: Has the educator's fluency with technology translated into unique opportunities for students to learn more quickly, with more depth and understanding?</p>				
<p>Is the educator's knowledge about technology's impact in her/his field of study reflected in the context of her/his students' learning?</p>				
<p>PROFESSIONAL PRACTICE AND COLLEGIALITY: Are educators using technology and communication networks to advance their professional practice?</p>				
<p>Are teachers knowledgeable and current with the technology and its impact in their field of study and the larger society?</p>				
<p>CLASSROOM AND INSTRUCTIONAL MANAGEMENT: Through their use of technology and telecommunications are educators creating learning contexts that require students to take on more independent roles in their own learning?</p>				

SYSTEM CAPACITY

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
VISION: Has the system engaged key stakeholders plus the broader community in defining and clearly stating a compelling vision and expectations for technology in schools?				
Is that vision embraced by the entire system?				
LEADERSHIP AND PLANNING: Has the system developed a comprehensive plan?				
Is there alignment between the plan for technology in schools and existent policies and practices (e.g. rules and regulations, fiscal priorities, operating practices, allocation of resources, investment in human capital and accountability)?				
ENSURING CAPACITY: Is the system ensuring that educators, communities, and components of the system itself have the capacity to translate that vision into compelling, meaningful learning activities for children, youth and adults?				
SYSTEMS THINKING: Is there a team of leaders that embraces the vision and is in a position to facilitate the system changes that are necessary to reach that vision?				
Is the vision for improved learning through technology a design factor across the entire education system?				

COMMUNITY CONNECTIONS

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
<p>COMMITMENT: Are key community stakeholders committed and involved in planning implementing, and evaluating the system's use of learning technology?</p>				
<p>COLLABORATION: Has the system identified the full range of mutually beneficial partner-ships, exchanges, and collaborations?</p>				
<p>Are any of these opportunities currently being developed?</p>				
<p>CLARITY: Do all technology partnerships, ex-changes, and collaborations include clear articulation of expectations, implementation plans, time lines and accountability systems?</p>				
<p>COMMUNICATION: Are there mechanisms for ongoing communication among partners and the broader community for the purposes of celebrating successes, building awareness, monitoring progress, and encouraging wider participation?</p>				

ACCOUNTABILITY

PROGRESS RUBRIC

	NO	SOME PROGRESS	GOOD PROGRESS	YES
DELIVERABLES AND BENCHMARKS: Have clear goals been set, accompanied by logical implementation and change strategies, measurable standards and associated benchmarks?				
DATA COLLECTION / INTERIM PROGRESS: Is there a well designed data collection and analysis process that tracks progress, leads to data-driven decision making, and provides evidence as to whether or not the intervention is leading toward the goals?				
DATA DRIVEN DECISION MAKING: Is the data analysis appropriately informing decision making related to technology?				
COMMUNICATION: Is the communication plan keeping stakeholders informed?				
Does the communication plan provide a feedback mechanism for continuous improvement?				

DISTRICT TECHNOLOGY STRATEGIES

- 2-1 Implement, monitor, and evaluate K-8 and 9-12 technology curriculum**
- 2-2 Provide equipment and materials for all students to attain technology curriculum requirements**
- 2-3 Continually update staff technological equipment and materials**
- 2-4 Increase reliability of technology equipment**
- 2-5 Increase support for using technology in instruction**
- 2-6 Provide on-going staff development activities**
- 2-7 Secure funding sources to facilitate on-going efforts to accomplish this goal**
- 2-8 Communicate instructional use of technology to parents, community, and staff.**
- 2-9 Implement and refine the District Technology Plan**

ACTION ITEMS

- 1. Increase and improve student access to technology.**
- 2. Add interactive capabilities to the district web page (for staff, students, parents, community members, and prospective employees)**
- 3. Enhance and implement technology staff development to support the curriculum.**
- 4. Explore and develop business and parent partnerships for the advancement of technology.**
- 5. Develop a plan for the purchase and installation of TV Data Monitors connection devices, and mounting brackets, in each classroom at Plainfield and Sherwood Elementary for applicable technology curriculum integration.**
- 6. Develop a plan to replace staff and lab PCs on a five-year cycle.**
- 7. Secure funding to add additional SAGINET carts at the elementary level.**
- 8. Secure funding for additional data video projectors.**
- 9. Develop a plan to improve technology integration and curriculum implementation and support.**
- 10. Review and adjust all staff voice/data/video drop placements in each classroom.**

SAGINAW TOWNSHIP COMMUNITY SCHOOLS

TECHNOLOGY USE AGREEMENT

Revised 11/30/99

The use of technology in the Saginaw Township Community Schools is an opportunity extended to students, faculty, and staff to enhance learning, productivity, and information processing. The computer hardware and software of the Saginaw Township community Schools shall be used solely for educational purposes specified by the Board of Education and staff of the Saginaw Township Community Schools. All users must abide by Board of Education policies.

Internet based services are available to all students, staff, and community members in Saginaw Township through the Saginaw Township Community School's on-line system called STCSNet. We are very pleased to provide this to Saginaw Township and believe the Internet offers vast, diverse and unique resources to its users. Our goal in providing this service is to promote educational excellence in schools by facilitating resource sharing, innovation, and communication. Any reference made to the "network" is intended to apply to the Internet, the District's wide area network (WAN), the District's local area networks (LANs), and any Networked or Stand-alone computer, hardware, software, or related items provided by the school for student use.

1. Terms and Conditions

1.1 Users of the STCSNet agree to the Terms and Conditions as set forth in this document. Moreover, they agree that access to STCSNet is a privilege and not a right, and they will abide by the decisions and instructions of the STCSNet administrator(s) with regard to usage of the system.

2. District Support

2.1 STCS will provide technological structure, hardware, software and electronics.

2.2 STCS will be responsible for maintaining and managing this network and equipment. STCS will monitor the purchase and installation of equipment and software.

2.3 STCS will develop, manage and administer a network policy and define any issue regarding the acceptable use policy.

2.4 STCS will ensure proper security measures are implemented and monitored on the network.

3. Hardware

3.1 Users are responsible for treating all hardware in a manner that enables its ongoing usage. Any acts of vandalism, such as destruction of hardware, software, work of others, introduction and spreading viruses, altering or disrupting the performance of hardware, and wasteful use of finite resources, will result in disciplinary consequences for the user and will result in loss of technology use privileges.

3.2 Users are responsible for adhering to rules, including but not limited to, those posted in classrooms & labs.

4. Copyright

4.1 Users shall not place the district at legal risk for violation of copyright law.

4.2 All users must abide by copyright laws and regulations as well as the Saginaw Township Community Schools district copyright policies. This would include making copies of software owned by the district, installation of privately owned or unlicensed software on district equipment; downloading, transferring or storing unlicensed or illegal software or inappropriate files using district equipment.

5. Network Security

5.1 All users granted STCS network accounts shall log on only with their designated account name and password.

Allowing another user to use your login name and password is prohibited. It is also the responsibility of users to shut down all personal network connections to ensure that others do not use them. Any member identified as a security risk or having a history of problems with other computer systems may be denied access to the STCS network. It is the responsibility of each user to report problems to a district staff member if they occur. These problems or breach of network security should not be discussed or demonstrated with other users or unauthorized personnel.

5.2 Users shall not attempt to gain unauthorized access to secured resources or data; nor to go beyond authorized access. This includes accessing files that are not your own; sabotaging, altering or deleting another's work; or making use of teaching aids.

6. Appropriate use

6.1 The use of the network must be in support of education and research and must be consistent with the educational outcomes of the District. STCSNet is a curriculum tool, which is designed to serve the learning needs of the district. Any activity that fosters that purpose is encouraged. Any activity that does not is discouraged or prohibited. Users agree to engage in activity that is lawful and non-disruptive to other users of the Internet.

6.2 Use of commercial activities is prohibited. Any services accessed which require a monetary or financial commitment, or any expense incurred shall be the responsibility of the individual user.

6.3 Chat room connections are not allowed unless specifically authorized by a supervisor or administrator.

6.4 Users shall not use STCSNet to access, view, post or download material that is profane or obscene (pornography), that advocates illegal acts or that advocates violence or discrimination towards other people. If inappropriate information is mistakenly accessed, the user should immediately tell a teacher or supervisor to protect against intentional violation of this policy.

7. Email

7.1 Any e-mail created, sent, and/or received is not guaranteed to be private. All communication & information accessible via STCSNet is the property of the Saginaw Township Community Schools.

7.2 Any inappropriate messages known to be created, sent, and/or received should be reported to teachers, supervisors, or administrators.

7.3 Posting anonymous messages, sending junk mail, and/or engaging in unauthorized communications is not allowed on the STCS network.

7.4 Harassment of others or engaging in hate mail, harassment, discriminatory remarks or antisocial behaviors is prohibited.

8. Code of Ethics

8.1 Users are not to engage, access or use in any way anything except what they have received specific permission to use. Unauthorized infiltration of computer systems must be avoided. Any malicious use of information technology to disrupt use by others is prohibited.

8.2 Users must avoid using property of STCS for private business, product advertisement or political lobbying, this includes any use for financial or commercial gain.

8.3 STCS staff may have access to the Internet and e-mail for their personal use so long as such use is not during scheduled working hours and such use does not create any additional expense for the District.

8.4 Harassment or discrimination against others is prohibited. Users are not to reveal personal addresses or telephone numbers of others. Use of inappropriate language, profanity, vulgarities, etc., or using the STCS network for illegal activity is prohibited.

9. Account membership

9.1 Staff currently employed by STCS and STCS board of education members may be granted accounts on the STCS network. Students currently enrolled in STCS may be granted a network account. Others may be granted temporary accounts: i.e., volunteers, community school students, students enrolled in classes using district labs and equipment, etc.

10. Backup

10.1 All district employees are responsible for daily backup procedures. If data is lost due to failure to backup periodically said data must be restored.

10.2 Saginaw Township Community Schools will not be responsible for loss of any student file on district equipment. It is the responsibility of each student to make backups of all work.

11. Disciplinary Procedures

11.1 Any user found engaged in unethical and unacceptable conduct shall be subject to disciplinary actions. Such actions may include, but are not limited to: warning, revoked privileges, financial restitution, suspension, expulsion for students, discharge for employees, and referral to legal authorities.

12. Warranty

12.1 While STCS network makes every effort to maintain an error free system, it makes absolutely no warranties of any kind, either expressed or implied, for the services it is providing. STCS network will not be responsible for any damages

suffered or caused by any user. This includes but is not limited to, any loss of data by any means. Documents stored on the network are not guaranteed to be private. Any and all use of any of the information obtained via the Internet or obtained through its STCS network is at the user's own risk. The user agrees to indemnify and hold harmless STCS, its sponsors, individual board members, agents, or employees from and against any claim, lawsuit, cause of action, damage judgment, or administrative complaint arising out of the use of STCS network, hardware, software, and/or network facilities under this agreement.

I have read, understand, and will abide by the above Technology Use Agreement. Should I commit any violation of this agreement, I understand that my privileges to use technology may be revoked as provided in this agreement, and that disciplinary action and/or appropriate civil and/or criminal legal action may be taken.

Sign and send this completed form to the Human Resources Office.

(Please print) _____

Last Name	First Name	Middle Initial
_____	_____	_____
User's signature		Date

District Internet Use Agreement

Please read this agreement for Internet use privileges before signing.

Internet based services are available to all students, staff, and community members in Saginaw Township through the Saginaw Township Community School's online system called STCSNet. We are very pleased to provide this to Saginaw Township and believe the Internet offers vast, diverse and unique resources to its users. Our goal in providing this service is to promote educational excellence in schools by facilitating resource sharing, innovation, and communication.

Terms and Conditions

Users of STCSNet agree to the Terms and Conditions as set forth in this document. Moreover, they agree that access to STCSNet is a privilege and not a right, and they will abide by the decisions and instructions of the STCSNet system administrator(s) with regard to usage of the system. This privilege may be revoked by the system administrator(s) at anytime for misconduct. These Terms and Conditions are specific, non-exclusive examples of misuse of the system. Users agree to engage in activity that is lawful and non-disruptive to other users of the Internet. Specifically, they agree to the following:

Appropriate Use

The use of STCSNet during scheduled working hours MUST be in support of research and educational objectives and be consistent with the educational outcomes of the user's school district. STCSNet is a curriculum tool that is designed to serve the learning needs of the district. Any activity that fosters that purpose is encouraged. Any activity that does not is discouraged or prohibited. The use of any other organization's network and/or computing resources through STCSNet must also comply with the rules and policies appropriate to that network. Use for commercial activities is prohibited. Any services accessed which require a monetary or financial commitment, or any expense incurred shall be the responsibility of the individual user. Users are expected to maintain their electronic mailboxes and work areas regularly and to keep their data within the limits imposed by the STCSNet system administrator(s). Be thoughtful in your use of the various public topics on this system. Keep the subject of your message within the guidelines for the area.

Network Etiquette

You are expected to abide by the generally accepted rules of computer network etiquette. At the present time, these include (but are not limited to) the following:

1. Be polite. Do not be abusive in your messages to others. Treat others fairly.
2. Use appropriate language. Do not swear or use vulgar, obscene, or inappropriate language. All communications deemed illegal by any federal, state or local ordinances are strictly forbidden.

3. Do not reveal the personal address and/or phone number of yourself or of any other person.
4. Note that your electronic mail is not guaranteed to be private. People who operate the system have access to all electronic mail. Messages relating to or in support of illegal activities will be reported to the proper authorities.
5. Do not use the network in such a way that you would disrupt the use of the network by other users. The system administrator(s) have complete discretion regarding any violation of this standard.
6. As the rules and guidelines for network etiquette change and evolve, users are responsible for understanding and abiding by those generally accepted rules of the Internet

Copyrighted Material

Copyrighted material must not be placed on any system connected to STCSNet without the permission of the copyright holder. Users may download copyrighted material within accepted educational objectives and with the expressed permission of the owner or authorized person.

Public Domain Material

Any user may download public domain programs for her/his own use or non-commercially redistribute public domain programs or data. Users assume all risks regarding the determination of whether a program is in the public domain.

Privileges

The use of STCSNet is a privilege, not a right and inappropriate use of that connection may result in cancellation of those privileges and may result in further disciplinary action.

Security

Security on any networked computer system is critical, especially when the system involves a variety of users. If you can identify a security problem, notify the STCSNet system administrator(s) immediately. Do not demonstrate the problem to any users except as directed by the STCSNet system administrator(s). Do not attempt to gain security codes, passwords, or other private information regarding another user or system. Do not share your security codes or passwords. Moreover, you shall not use another individual's account unless specifically and personally directed to do so by the STCSNet system administrator(s). You are not to misrepresent yourself on the system in any way. Finally, any unauthorized effort to log on to the Internet as another user is prohibited and may result in cancellation of all privileges. Any action by any user that is deemed by the STCSNet system administrator(s) to be a threat to the integrity of system will result in the loss of all privileges.

Vandalism

Vandalism will result in the cancellation of all system privileges. Vandalism is defined as any attempt to destroy, or disrupt the operation of the hardware, software, or the data of any other user on this system or any other system. This includes, but is not limited to, the uploading and/or creation of computer viruses.

Warranty

While STCSNet makes every effort to maintain an error free system, it makes absolutely no warranties of any kind, either expressed or implied, for the services it is providing. STCSNet will not be responsible for any damages suffered or caused by any user. This includes but is not limited to, any loss of data by any means. Any and all use of any of the information obtained via the Internet or obtained through its STCSNet is at the user's own risk. The user agrees to indemnify and hold harmless STCSNet, its sponsors, individual board members, agents, or employees from and against any claim, lawsuit, cause of action, damage judgment, or administrative complaint arising out of the use of STCSNet, hardware, software, and/or network facilities under this agreement.

Termination of Account

A user may terminate her/his account on STCSNet by contacting the STCSNet administrator(s). The system administrator(s) reserve the right at their sole discretion, to suspend or terminate a member's access to and use of STCSNet upon any breach of the Terms and Conditions by any user.

Enforcement Provisions

While the system administrator(s) makes every effort to maintain and respect a user's privacy, it may become necessary to monitor any or all activity on STCSNet and to inspect any files.



Saginaw Township Community Schools Web Authoring Agreement

The following covers all Internet web pages developed and available in the Saginaw Township Schools technology infrastructure. The terms “page(s)” and “web page(s)” refers to an individual, HTML-based file and all dependent files (graphics, etc.) that are connected within it. The term “site” refers to a grouping of pages with a particular theme or common page owner. The term “STCS home page” refers to the web page accessible at <http://www.stcs.org>. The term “STCS web site” refers to **all** the files and folders that are contained within the STCS school district web server as well as any files contained on any other server that are linked and available through any file accessible through the STCS web site.

1. General

- 1.1. All STCS web site pages developed and available shall follow Board Policy, applicable laws (Including the Children’s Online Privacy Act and The Children’s Online Protection Act), and the guidelines in this document.
- 1.2. All pages stored on the STCS web server shall be accessible via links originating from the STCS home page (by school, department, etc.). Links from sources outside the STCS Wide-Area-Network to pages within the STCS web site must also be actively linked through the STCS Home Page. (i.e. Links that have been removed from being actively linked by their original source on STCS may no longer be linked outside of the STCS district nor shall the STCS web server be used as “storage” space for other web pages outside of the district.)
- 1.3. A personal web folder may be requested by any board member, administrator, staff member, or student. Pages may also be developed by organizations already sanctioned by the Board of Education, for example: classrooms, boosters groups, parent/teacher organizations, clubs, teams, etc. and these organizations may also request a personal web folder as well.
- 1.4. STCS web pages will be developed using licensed software while using any STCS computer to create it. Software may not be installed on any district computer unless the software and its installation have been approved by the STCS Information Technology Department.
- 1.5. Personal web folders will only assigned to persons who have read and agreed to the STCS Technology and Internet Use Agreement and the Web Authoring Policy. Their signed, approved applications must both be on file with the STCS Technology Support Coordinator.
- 1.6. Electronic transmission of materials is a form of copying. All applicable federal, state and local laws and district policies related to copyrights must be followed.

2. Ownership and Retention

- 2.1. All web pages on STCS district servers and/or computers are the property of the school district. As such, they are subject to all district policies and regulations.
- 2.2. Web pages will be deleted when students or staff leave the district for any reason, including a student’s graduation, a staff member leaving employment, or any time that a person’s formal relationship with the district is terminated, unless prior written arrangements have been made.
- 2.3. Web pages *may* have their link removed or may be deleted when not updated in a timely manner, subject to the discretion of the Webmaster for any pertinent, individual STCS entity for that site or of the STCS Information Technology Department.

3. Site Development

3.1 The **Building Administrator** will:

- 3.1.1 Appoint a Building Webmaster (individual or team) to coordinate and supervise all page development for that building's web site, either by doing so themselves or by designating a staff member to do so in their place and approving that decision. This designee will be responsible for the content of that building's site and all it contains.
- 3.1.2 Determine who should be trained within their Building for the purpose of web page development. They may direct those training needs to the Technology Support Coordinator or anyone else they feel will meet these needs.
- 3.1.3 Follow up to ensure that the Building Webmaster is ensuring appropriate content for the building's web pages/site(s)

3.2 **Building Webmasters** will ensure the following:

- 3.2.1 There is always an appropriate entry point page available for their building at the location: **http://www.stcs.org/<buildingname>/** with the file name "index.htm".
- 3.2.2 There is always a page available for their account at the location: **http://www.stcs.org/<buildingname>/** with the file name "index.htm" and that this file lists their building's staff and appropriate contact information as approved and/or designated by the **Building Administrator**.
- 3.2.3 The "staff" directory for their building and its subdirectories are not moved or altered.
- 3.2.4 They will follow all federal, state and local laws with regard to the content of the Building's main site area for which they are responsible.
- 3.2.5 They will adhere to all policies outlined in this agreement as well as any that are defined by their **Building Administrator** with regard to the content and design of the Building's main site area for which they are responsible.
- 3.2.6 That all content within their Building's directory is appropriate and that any illegal or inappropriate content that is found in their building's subdirectories is reported and/or handled appropriately according to district and building policies as well as federal, state or local law, where applicable.
- 3.2.7 Their user account access (username and password) is privately maintained and is not shared with anyone else.

3.3 **Web Account Holders** will ensure the following:

- 3.3.1 There is always an appropriate entry point page available for their account at the location: **http://www.stcs.org/<buildingname>/staff/<username>** with the file name "index.htm".
- 3.3.2 They will follow all federal, state and local laws with regard to the content of the web pages in their account folder.
- 3.3.3 They will adhere to all policies outlined in this agreement as well as any that are defined by their **Building Administrator** and/or their **Building Webmaster** with regard to the content and design of the web pages in their account folder.
- 3.3.4 Content on their own account's site and in their assigned directory is appropriate and is used for the purposes agreed to when applying for the account.
- 3.3.5 Their user account access (username and password) is privately maintained and is not shared with anyone else.

4. Design

- 4.1. Size and design of individual web pages should be easily viewable and legible at a standard screen resolution using a standard web browser, such as Microsoft Internet Explorer.
- 4.2. Web pages shall follow any standard template that may be designated by the **Building Webmaster** and/or the **Building Administrator**.
- 4.3. **All STCS** web pages shall include, either through use of a frame navigation menu or on the individual page:
 - 4.3.1. A link to the STCS Main Home page at: **http://www.stcs.org**.
 - 4.3.2. A link to the Building's Main Home page at: **http://www.stcs.org/<buildingname>**
 - 4.3.3. A link to the Building's Main Staff page at: **http://www.stcs.org/<buildingname>/staff**

- 4.4. Building's sites are strongly encouraged to also include (usually as links from the home page):
 - 4.4.1. Mission Statement
 - 4.4.2. A Principal's page and other Administrator pages, where applicable. These need not be done by the principal/administrator, but should reflect their thoughts and must be approved by them.
 - 4.4.3. Information about any Parent Organization or other official groups
 - 4.4.4. Newsletter
 - 4.4.5. Honors and awards
 - 4.4.6. Classroom pages
 - 4.4.7. Test Scores (composite grade/building scores, such as MEAP), where applicable
 - 4.4.8. A link to the Annual report included on the STCS Main Home page
 - 4.4.9. Activity and/or sports information and calendars pertinent to the school (A general calendar will be available from the STCS district home page.)
 - 4.4.10. Links to Food Service, Buildings & Grounds, and Transportation
- 4.5. Each building shall supervise its own pages to ensure that links are appropriate and follow all standards in this policy. All content and/or links shall be limited to non-profit and educational uses only. All staff e-mail references shall be limited to the STCS domain only.
- 4.6. Any district marketing plans shall be considered in the review of building pages.

5. Student Identification

- 5.1. Student identification may be made by first and last name, only with written parent permission at the time of each circumstance. Otherwise, student identification must be by first name only.
- 5.2. Written parent permission must be obtained for any student who can be identified visually.
- 5.3. No student may be identified in any situation in which his or her status in counseling, special education, or other right to privacy circumstance could be compromised.

6. Staff Identification

- 6.1. District e-mail addresses made available for the purpose of parent and/or student contact will be available for each Building's staff members by approval of that Building's Administrator.
- 6.2. Staff members' pictures or other directory information will only be used in accordance with permission given as part of the publishing rights granted by staff each year for the district staff directory. In the absence of such permission, staff must give written approval for identification used by others.

7. Content

- 7.1. Content of all pages including links shall be limited to school related activities and educational interests only.
- 7.2. All staff e-mail references shall be limited to the STCS.ORG domain only.
- 7.3. All content and/or links shall be limited to non-profit uses only
- 7.4. All content shall follow all Board of Education policies and regulations as well as all applicable State and Federal Laws.

8. Due Process

- 8.1. The District will cooperate fully with local, state, or federal officials in any investigation concerning or relating to any illegal activities conducted through this web site system.
- 8.2. Any District administrator may terminate the account privileges of an authorized user within their domain by providing notice to the user and to the Information Technology Department.

9. Search and Seizure

- 9.1. System users have a limited privacy expectation in the content of their personal files and records of their on-line activity while on the system.

- 9.2. Routine maintenance and monitoring of the system may lead to discovery that a user has violated or is violating district policy, a student disciplinary code, or the law. If a potential violation by a district user is discovered, the appropriate administrator and/or the Superintendent shall be notified and appropriate action will be taken.
- 9.3. An individual computer file search may be conducted if there is reasonable suspicion that a user has violated the law or the student disciplinary code. The nature of the investigation will be reasonable and within the context of the nature of the alleged violation. The district will cooperate with local, state, and/or federal authorities in any investigation they might be conducting regarding an individual user.
- 9.4. Web Account Holders should be aware that their personal computer files may be discoverable under state and/or federal law.

These guidelines are an attempt to focus the communication provided in the STCS web pages upon high quality, creative content related to education, and the mission and goals of the Saginaw Township Community School District.

If you are interested in a web account and you agree with these guidelines, you are encouraged to fill out an application. If you are interested in being a Webmaster for your building, please see your Building Administrator (Principal).

If you have questions about these policies or need help with anything related to the STCS Internet web policies or with developing a web page, contact:

Bobbi Gorden <bjgorden@stcs.org>

**Technology Support Coordinator
Saginaw Township Community Schools
(989) 797-1800 ext. 501**

"TECHNOLOGY AS A TOOL"

GRADE LEVEL STANDARDS & BENCHMARKS

KINDERGARTEN

Keyboarding

- K-1 Identify parts of a computer.
 - 1. Recognize parts of a computer related to hardware.
 - 2. Recognize parts of computer related to software.
- K-2 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- K-3 Simulate correct physical form while working at a computer station.
 - 1. Show correct posture while working at a computer station.
 - 2. Recognize the need for movement breaks.
 - 3. Show correct right/left hand placement.
- K-4 Use specified keys to develop proficiency at keyboarding.
 - 1. Practice basic key functions to run appropriate age level computer programs.

Word Processing

- K-5 Operate a computer.
 - 1. Recognize parts of a computer related to hardware.
 - 2. Recognize parts of a computer related to software.
- K-6 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- K-7 Recognize characteristics of word processing.
 - 1. Select simple menus.
- K-8 Create a simple word processing document.
 - 1. Demonstrate ability to use text print.

Database

Spreadsheet

Desktop Publishing

- K-9 Use proper tools to create a product.
 - 1. Show knowledge of hardware.
 - 2. Show knowledge of software programs.
- K-10 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment
 - 2. Observe rules of etiquette
 - 3. Review and sign user policy.

- K-11 Assemble and compose text.
 - 1. Apply skills to create text.
 - 2. Apply skills to modify text.
- K-12 Assemble and compose graphics.
 - 1. Apply skills to create graphics.
 - 2. Apply skills to modify graphics.

Telecommunications

Multimedia

GRADE LEVEL STANDARDS & BENCHMARKS

FIRST GRADE

Keyboarding

- 1-1 Demonstrate the appropriate use of hardware and software.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 1-2 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 1-3 Simulate correct basic physical form while working at a computer station.
 - 1. Show correct posture while working at computer stations.
 - 2. Recognize the need for movement breaks.
 - 3. Show correct right/left hand placement.
- 1-4 Develop use of specified keys.
 - 1. Operate letter keys.
 - 2. Operate number keys.
 - 3. Operate function keys.

Word processing

- 1-5 Operate a computer.
 - 1. Interact with the computer hardware.
 - 2. Use software to publish a simple document.
- 1-6 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 1-7 Label elements of word processing.
 - 1. Describe a simple menu.
 - 2. Identify tool bar.
 - 3. Identify rulers.
 - 4. Identify drawing tools.

- 1-8 Create a simple word processing .
 - 1. Edit a simple document and undo the changes.
 - 2. Explain print/print preview.
- 1-9 Revise a word processing document.
 - 1. Assess format on screen.
 - 2. Use drawing tools for revisions.

Database

Spreadsheet

Desktop Publishing

- 1-10 Use proper tools to create a product.
 - 1. Utilize knowledge of hardware.
 - 2. Utilize knowledge of software.
- 1-11 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 1-12 Assemble and compose text.
 - 1. Exhibit the ability to create text.
 - 2. Demonstrate the ability to modify text.
- 1-13 Assemble and modify graphics.
 - 1. Create graphics using drawing tools.
 - 2. Demonstrate the ability to modify graphics.

Telecommunications

Multimedia

- 1-14 Utilize basic multimedia tools.
 - 1. Utilize knowledge of hardware and other multimedia tools.
 - 2. Utilize knowledge of multimedia software.
- 1-15 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette
 - 3. Review and sign user policy.
- 1-16 Create presentation/project.
 - 1. Find ways to locate and gather information through the use of multimedia.
 - 2. Organize useable data using various forms of multimedia.
 - 3. Produce a presentation/project.
- 1-17 Assess presentation/project.
 - 1. Demonstrate ethical use of multimedia.
 - 2. Rate effectiveness of a presentation/project.
 - 3. Design a layout for a presentation/project.
 - 4. Assess core curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

SECOND GRADE

Keyboarding

- 2-1 Demonstrate the appropriate use of hardware and software.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 2-2 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 2-3 Simulate correct physical form while working at a computer station.
 - 1. Show correct right/left hand placement.
- 2-4 Develop use of specified keys.
 - 1. Operate letter keys.
 - 2. Operate number keys.
 - 3. Utilize character keys.
 - 4. Operate function keys.
- 2-5 Utilize function keys.
 - 1. Demonstrate use of tab key.

Word Processing

- 2-6 Demonstrate the appropriate use of hardware and software.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 2-7 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 2-8 Construct a document using elements of word processing.
 - 1. Use a simple menu.
 - 2. Define and use a simple tool bar.
 - 3. Identify rulers.
 - 4. Utilize drawing tools.
- 2-9 Create a simple word processing document .
 - 1. Edit a simple document and undo the changes.
 - 2. Demonstrate how to store/save a file.
 - 3. Demonstrate how to open/retrieve a file.
 - 4. Demonstrate how to create a file.
 - 5. Demonstrate how to close a file.
 - 6. Demonstrate how to quit/exit a software program.
 - 7. Demonstrate how to use basic print skills.
- 2-10 Revise a word processing document.
 - 1. Open/retrieve files.
 - 2. Identify drawing tools.

Database

Spreadsheet

Desktop Publishing

- 2-11 Demonstrate the appropriate use of hardware and software.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 2-12 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 2-13 Assemble and compose text
 - 1. Apply skills to create text.
 - 2. Apply skills to modify text.
- 2-14 Show ability to develop and modify graphics.
 - 1. Show ability to create graphics using paint tools.
 - 2. Show ability to modify graphics using cut and paste tools.

Telecommunications

Multimedia

- 2-15 Utilize basic multimedia tools.
 - 1. Utilize knowledge of hardware and other multimedia tools.
 - 3. Utilize knowledge of multimedia software.
- 2-16 Maintain ethical behavior.
 - 1. Practice proper respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
- 2-17 Create a presentation/project.
 - 1. Manipulate different ways of locating and gathering information through use of multimedia.
 - 2. Organize useable data using various forms of multimedia.
 - 3. Produce a presentation/project.
 - 4. Prepare and design layout for presentation/project.
- 2-18 Assess presentation/project.
 - 1. Demonstrate ethical use of multimedia.
 - 2. Demonstrate effective media for presentation/project .
 - 3. Evaluate presentation/project layout.
 - 4. Demonstrate the integration of media to produce presentation/projects.
 - 5. Assess core curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

THIRD GRADE

Keyboarding

- 3-1 Manipulate computer components to properly load and run prepared programs.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 3-2 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-3 Use the specified keys to develop proficiency at keyboarding.
 - 1. Review previous learned keys.
- 3-4 Locate specified keys.
 - 1. Use basic function keys.
- 3-5 Exhibit proficiency in keyboarding.
 - 1. Appropriate speed and accuracy.
 - 2. Demonstrate correct finger etiquette.

Word Processing

- 3-6 Manipulate computer components to properly load and run prepared programs.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 3-7 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-8 Construct a document using elements of word processing.
 - 1. Identify writing tools.
 - 2. Utilize rulers.
- 3-9 Create a simple word processing document.
 - 1. Edit using cut/copy/paste.
 - 2. Utilize software features.
- 3-10 Assess a word processing document.
 - 1. Publish using a template.
 - 2. Revise document as needed.
 - 3. Assess core curriculum content for accuracy.

Database

- 3-11 Manipulate computer components to properly load and run prepared programs.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.

- 3-12 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-13 Create a database.
 - 1. Determine use of database.
 - 2. Design format of database.
 - 3. Record data.
- 3-14 Utilize a database for presentation/project.
 - 1. Collect information.
 - 2. Select information.
 - 3. Modify/edit data.
- 3-15 Choose a database.
 - 1. Determine appropriate database.
 - 2. Assess core curriculum content for accuracy.
- 3-16 Assess database usage.
 - 1. Demonstrate ability to design, create, and record information.

Spreadsheet

- 3-17 Manipulate computer components to properly load and run prepared programs.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.
- 3-18 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-19 Examine characteristics of a spreadsheet.
 - 1. Demonstrate an understanding of spreadsheet vocabulary.
 - 2. Identify the purpose of storing numerical data.
- 3-20 Create a spreadsheet.
 - 1. Collect data.
 - 2. Format cells to organize data.
 - 3. Enter numerical data.
 - 4. Calculate data.
 - 5. Produce a spreadsheet display.
- 3-21 Produce a print out of a spreadsheet.
 - 1. Prepare spreadsheet for printing.

Desktop Publishing

- 3-22 Manipulate computer components to properly load and run prepared programs.
 - 1. Operate the computer independently using hardware.
 - 2. Operate the computer independently using software.

- 3-23 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-24 Assemble and compose text
 - 1. Apply skills to create text.
 - 2. Apply skills to modify text.
- 3-25 Demonstrate ability to develop and modify graphics.
 - 1. Show ability to create graphics.
 - 2. Show ability to modify graphics.
- 3-26 Assess document for publication.
 - 1. Evaluate document layout.
 - 2. Assess core curriculum content for accuracy.

Telecommunications

- 3-27 Incorporate hardware and software telecommunication tools.
 - 1. Demonstrate usage of hardware and software for telecommunications.
- 3-28 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-29 Demonstrate appropriate procedures to access and use the Internet.
 - 1. Show necessary steps to access the Internet.
 - 2. Compose, transmit, and receive e-mail messages.
- 3-30 Assess telecommunication usage.
 - 1. Utilize telecommunication tools appropriately.
 - 2. Compose, transmit, and receive e-mail messages.
 - 3. Assess to core curriculum content for accuracy.

Multimedia

- 3-31 Utilize various multimedia tools.
 - 1. Apply knowledge of various multimedia tools.
 - 2. Operate the computer independently using software.
- 3-32 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 3-33 Create a presentation/project.
 - 1. Compare various multimedia tools for locating and gathering data.
 - 2. Interpret usable data.
 - 3. Produce a presentation/project.

- 3-34 Assess presentation/project.
1. Use appropriate documentation.
 2. Demonstrate effective media for presentation project.
 3. Evaluate presentation/project layout.
 4. Integrate various multimedia to produce presentation/projects.
 5. Assess core curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

FOURTH GRADE

Keyboarding

- 4-1 Identify desktop icons.
1. Examines the use of desktop icons.
- 4-2 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
- 4-3 Use the specified keys to develop proficiency at keyboarding.
1. Utilize basic function keys.
- 4-4 Locate specified keys.
1. Use control key options.
 2. Utilize character keys.
- 4-5 Exhibit proficiency in keyboarding.
1. Achieve appropriate speed of 15 words per minute with 80% accuracy.
 2. Demonstrate correct finger technique.

Word Processing

- 4-6 Utilize word processing with networking.
1. Search a Local Area Network (LAN) and/or Wide Area Network (WAN) for information.
 2. Identify the server.
- 4-7 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
- 4-8 Construct a document using elements of word processing.
1. Use the tool bar in simple word processing setups.
 2. Identify shortcuts.
 3. Identify key commands.
 4. Design a document using drawing tools.
- 4-9 Demonstrate the management of files.
1. Create and edit a document.
 2. Use various management tools.

- 4-10 Assess a word processing document.
1. Publish a document that has been checked for vocabulary.
 2. Assess core curriculum content for accuracy.

Database

- 4-11 Examine the use of tools.
1. Demonstrate knowledge of computer components.
- 4-12 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
- 4-13 Create a database.
1. Determine use of database.
 2. Design format of database.
 3. Record data.
- 4-14 Utilize a database for presentation/project.
1. Retrieve information.
 2. Select records in a search.
 3. Enter and modify data.
- 4-15 Choose a database.
1. Determine appropriate database.
 2. Assess core curriculum content for accuracy.
- 4-16 Assess database usage.
1. Demonstrate how to assess and utilize appropriate information.

Spreadsheet

- 4-17 Identify desktop icons.
1. Identify the use of desktop icons.
- 4-18 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
- 4-19 Examine spreadsheet characteristics
1. Define spreadsheet vocabulary.
 2. Demonstrate how numerical data is stored and manipulated.
- 4-20 Construct a spreadsheet.
1. Collect and organize data.
 2. Format cells.
 3. Enter numerical data.
 4. Demonstrate an understanding of formulas.
 5. Calculate data.

- 4-21 Produce a print out of a spreadsheet.
 - 1. Prepare spreadsheet for printing.
- 4-22 Interpret spreadsheet results.
 - 1. Compare and contrast data.

Desktop Publishing

- 4-23 Use proper tools to create a product.
 - 1. Examine proper use of hardware and software.
 - 2. Incorporate the integration of hardware and software.
- 4-24 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 4-25 Assemble and compost text.
 - 1. Create a document.
 - 2. Demonstrate ability to import text.
 - 3. Demonstrate ability to modify text.
- 4-26 Demonstrate ability to develop and modify graphics.
 - 1. Demonstrate ability to import clipart.
 - 2. Demonstrate ability to modify graphics using color.
- 4-27 Integrate text and graphics in a document.
 - 1. Design a layout using colors and importing graphics.
- 4-28 Assess document for publication.
 - 1. Evaluate document layout.
 - 2. Evaluate the integration of text, graphics and media.
 - 3. Assess core curriculum content for accuracy.

Telecommunications

- 4-29 Incorporate hardware and software telecommunication tools.
 - 1. Demonstrate usage of hardware and software for telecommunications.
- 4-30 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
- 4-31 Demonstrate appropriate procedures to access and use the Internet.
 - 1. Utilize Internet software to access the world wide web.
- 4-32 Assess telecommunication usage.
 - 1. Utilize telecommunication tools appropriately.
 - 2. Use the World Wide Web browser to locate and bookmark information.
 - 3. Assess core curriculum content for accuracy.

Multimedia

- 4-33 Utilize various multimedia tools.
1. Develop a knowledge of specified hardware vocabulary.
 2. Demonstrate proper use of multimedia tools to produce presentations/projects.
 3. Incorporate the use of hardware and software to produce presentations/projects.
- 4-34 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
- 4-35 Create a presentation/project.
1. Incorporate different ways to locate and gather data.
 2. Organize useable data.
 3. Produce a presentation/project.
 4. Critique the appropriateness and completeness of the presentation/project.
- 4-36 Assess presentation/project.
1. Use appropriate documentation of sources.
 2. Choose appropriate multimedia to communicate clearly and artistically.
 3. Construct a layout that incorporates the main elements of design.
 4. Integrate various multimedia to produce presentations/projects.
 5. Assess core curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

FIFTH GRADE

Keyboarding

- 5-1 Select appropriate technological tools to demonstrate computer proficiency.
1. Assess correct hardware to produce an accurate and completed document.
- 5-2 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
 6. Evaluate current and emerging issues.
- 5-3 Utilize appropriate keys on keyboard.
1. Use specified function keys.
 2. Use control key options.
 3. Use specified character keys.
- 5-4 Utilize new keys and/or pull down menus.
1. Utilize menu bar.
- 5-5 Exhibit proficiency in keyboarding.
1. Achieve appropriate speed of 20 words per minute with 80% accuracy.
 2. Demonstrate correct finger technique.

Word Processing

- 5-6 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Assess correct hardware to produce an accurate and completed document.
- 5-7 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues.
- 5-8 Identify characteristics of a word processing document.
 - 1. Identify commands which modify the word processing environment.
- 5-9 Construct a document using elements of word processing.
 - 1. Create a document using short cuts and key commands.
 - 2. Use software specific commands to edit a document.
- 5-10 Assess a word processing document.
 - 1. Assess format of document.
 - 2. Revise a document and change necessary settings.
 - 3. Publish a document.
 - 4. Assess the core curriculum content for accuracy.

Database

- 5-11 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Access correct hardware to produce an accurate and completed document.
- 5-12 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues
- 5-13 Create a database.
 - 1. Arrange data.
- 5-14 Utilize a database for presentation/project.
 - 1. Retrieve information.
 - 2. Search database.
 - 3. Enter data.
- 5-15 Assess information in a database.
 - 1. Determine quality of information.
 - 2. Assess core curriculum content for accuracy.
- 5-16 Assess database usage.
 - 1. Demonstrate how to create, access, change and utilize a database.

Spreadsheet

- 5-17 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Access correct hardware to produce an accurate and completed document.

- 5-18 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues.
- 5-19 Examine spreadsheet characteristics.
 - 1. Define spreadsheet vocabulary.
 - 2. Demonstrate how numerical data is stored and manipulated.
 - 3. Display and interpret information.
- 5-20 Create a spreadsheet.
 - 1. Gather data.
 - 2. Retrieve data.
 - 3. Format cells.
 - 4. Enter data.
 - 5. Enter formulas.
 - 6. Calculate data.
- 5-21 Produce a print out of a spreadsheet.
 - 1. Construct form or type of display.
 - 2. Critique print display of spreadsheet.
- 5-22 Interpret spreadsheet results.
 - 1. Compare and contrast data.
 - 2. Critique data results for appropriateness and completeness.
- 5-23 Assess spreadsheet usage.
 - 1. Judge the ethics for etiquette and appropriate documentation.
 - 2. Assess the core curriculum content for accuracy.

Desktop Publishing

- 5-24 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Assess correct hardware to produce an accurate and completed document.
 - 2. Manage the integration of hardware.
- 5-25 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues
- 5-26 Assemble and compose text.
 - 1. Set up columns.
 - 2. Demonstrate ability to import files.
- 5-27 Demonstrate ability to develop and modify graphics.
 - 1. Demonstrate ability to import graphics.
 - 2. Demonstrate ability to modify and enhance graphics.

- 5-28 Incorporate text and graphics in a document.
1. Prepare and format a layout using column, margin and tab tools.
- 5-29 Assess a document for publication.
1. Assess ethical considerations.
 2. Assess effectiveness.
 3. Assess document layout.
 4. Assess the integration of text, graphics, and media.
 5. Assess core curriculum content for accuracy.

Telecommunications

- 5-30 Incorporate hardware and software telecommunication tools.
1. Demonstrate usage of hardware and software for telecommunications.
- 5-31 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
 6. Evaluate current and emerging issues.
- 5-32 Demonstrate appropriate procedures to access and use the Internet.
1. Use Internet chat-line to share information.
 2. Distribute information via e-mail.
- 5-33 Assess telecommunication usage.
1. Utilize telecommunication tools appropriately.
 2. Demonstrate ethical use while on chat-lines and using e-mail.
 3. Assess core curriculum content for accuracy.

Multimedia

- 5-34 Utilize various multimedia tools.
1. Incorporate knowledge of various tools to produce multimedia presentations/projects.
 2. Integrate appropriate hardware and software to produce multimedia presentations/projects.
- 5-35 Maintain ethical behavior.
1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
 6. Evaluate current and emerging issues.
- 5-36 Create a presentation/project.
1. Collect useable data from a variety of multimedia sources.
 2. Organize useable data.
 3. Produce a presentation/project.
 4. Assess the appropriateness and completeness of a presentation/project.
- 5-37 Assess presentation/project.
1. Exhibit appropriate documentation of sources.
 2. Judge the media effectiveness of a presentation/project.
 3. Assemble proper components of layout design.

4. Produce evidence of integration with a variety of multimedia.
5. Assess the curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

SIXTH GRADE

Keyboarding

- 6-1 Select appropriate technological tools to demonstrate computer proficiency.
 1. Demonstrate usage of hardware and software.
- 6-2 Maintain ethical behavior.
 1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
 6. Evaluate current and emerging issues.
- 6-3 Use menu functions for formatting.
 1. Utilize pull down menus.
- 6-4 Exhibit proficiency in keyboarding.
 1. Achieve 20 words per minute with 95% accuracy.
 2. Demonstrate correct finger techniques.

Word Processing

- 6-5 Select appropriate technological tools to demonstrate computer proficiency.
 1. Demonstrate usage of hardware and software.
- 6-6 Maintain ethical behavior.
 1. Practice proper care and respect of technological equipment.
 2. Observe rules of etiquette.
 3. Review and sign user policy.
 4. Examine laws of copyright.
 5. Document sources.
 6. Evaluate current and emerging issues.
- 6-7 Create a document using advance features.
 1. Design a document using graphics and text wrap.
- 6-8 Demonstrate the management of files.
 1. Create a simple template.
 2. Demonstrate how to import/export files.
 3. Edit document by inserting character, date, and time.
- 6-9 Assess a word processing document.
 1. Revise a document.
 2. Publish a document.
 3. Assess core curriculum content for accuracy.

Database

- 6-10 Select appropriate technological tools to demonstrate computer proficiency.
 1. Demonstrate usage of hardware and software.

- 6-11 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues.
- 6-12 Develop a database.
 - 1. Design format for a database.
 - 2. Merge information in a database.
- 6-13 Manage a database for presentation/project.
 - 1. Analyze and arrange data to create a report.
- 6-14 Evaluate information in a database.
 - 1. Assess appropriateness and completeness of information.
 - 2. Assess core curriculum content for accuracy.
- 6-15 Assess database usage.
 - 1. Create database.
 - 2. Evaluate data to assess ethical use.
 - 3. Critique effectiveness of database.
 - 4. Judge design layout.

Spreadsheet

- 6-16 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Demonstrate usage of hardware and software.
- 6-17 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues.
- 6-18 Examine spreadsheet characteristics
 - 1. Define spreadsheet vocabulary.
 - 2. Document the functions used in a spreadsheet.
- 6-19 Create a spreadsheet.
 - 1. Enter formulas necessary to construct spreadsheet.
- 6-20 Produce a print out of a spreadsheet.
 - 1. Select appropriate type of display.
- 6-21 Interpret spreadsheet results.
 - 1. Compare/contrast, and summarize data results.
 - 2. Critique data results for appropriateness and completeness.
 - 3. Make predictions from data results.
- 6-22 Assess spreadsheet usage.
 - 1. Judge ethics for etiquette and appropriate usage.
 - 2. Determine effectiveness of a spreadsheet.
 - 3. Assess the core curriculum content for accuracy.

Desktop Publishing

- 6-23 Choose proper tools to create a product.
 - 1. Demonstrate knowledge of hardware required for desktop publishing.
 - 2. Assemble the required hardware to publish/print a document.
- 6-24 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues.
- 6-25 Assemble and compose text.
 - 1. Modify text size and spacing.
 - 2. Assess quality of composed text.
- 6-26 Develop and modify graphics.
 - 1. Create an image and import it into a document for publishing.
 - 2. Modify an image with shading.
 - 3. Assess quality of graphic images.
- 6-27 Incorporate text and graphics in a document.
 - 1. Select format.
 - 2. Construct sample layout.
 - 3. Edit document.
 - 4. Examine print preview.
 - 5. Assess completeness and appropriateness.
- 6-28 Assess document for publication.
 - 1. Review document for ethical consideration.
 - 2. Produce a document using proper sequencing and white space.
 - 3. Assess core curriculum content for accuracy.

Telecommunications

- 6-29 Incorporate hardware and software telecommunication tools.
 - 1. Demonstrate usage of hardware and software for telecommunications.
- 6-30 Maintain ethical behavior.
 - 1. Practice proper care and respect of technological equipment.
 - 2. Observe rules of etiquette.
 - 3. Review and sign user policy.
 - 4. Examine laws of copyright.
 - 5. Document sources.
 - 6. Evaluate current and emerging issues.
- 6-31 Produce World Wide Web publications.
 - 1. Manage multimedia to produce home pages.
- 6-32 Assess telecommunication usage.
 - 1. Utilize telecommunication tools appropriately.
 - 2. Evaluate elements of a home page.
 - 3. Assess core curriculum content for accuracy.

Multimedia

- 6-33 Utilize various multimedia tools.
 - 1. Compare and contrast use of various multimedia tools.
 - 2. Demonstrate proper care of various multimedia tools.
 - 3. Integrate a variety of hardware and software to produce presentations/projects.
- 6-34 Maintain ethical behavior.
 - 1. Evaluate current and emerging issues.
 - 2. Demonstrate proper documentation of multimedia sources.
 - 3. Review and sign user policy.
- 6-35 Create a presentation/project.
 - 1. Investigate and gather data using a variety of multimedia tools.
 - 2. Organize useable data researched through multimedia.
 - 3. Create a presentation/project.
 - 4. Assess appropriateness and completeness of a presentation/project.
- 6-36 Assess presentation/project.
 - 1. Exhibit appropriate documentation of sources.
 - 2. Assess the media effectiveness of a presentation/project.
 - 3. Assess required elements of layout design.
 - 4. Show evidence of integration with a variety of multimedia.
 - 5. Assess core curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

SEVENTH GRADE

Keyboarding

- 7-1 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Demonstrate usage of hardware and software.
- 7-2 Maintain ethical behavior.
 - 1. Identify current and emerging issues.
 - 2. Review and sign user policy.
- 7-3 Use menu functions for formatting.
 - 1. Utilize pull down menus.
- 7-4 Exhibit proficiency in keyboarding.
 - 1. Achieve 25 words per minute with 95% accuracy.
 - 2. Demonstrate correct finger technique.

Word Processing

- 7-5 Select appropriate technological tools to demonstrate computer proficiency.
 - 1. Demonstrate usage of hardware and software.
- 7-6 Maintain ethical behavior.
 - 1. Identify current and emerging issues.
 - 2. Review and sign user policy.
- 7-7 Identify characteristics of a page layout.
 - 1. Format a document utilizing basic aspects of graphic design.
- 7-8 Demonstrate the management of documents.
 - 1. Create a document.

2. Format a document using different fonts and layouts.
 3. Design the layout of a document using more complex elements.
- 7-9 Assess a word processing document.
1. Revise text for grammar.
 2. Publish a document.
 3. Assess core curriculum content for accuracy.

Database

- 7-10 Select appropriate technological tools to demonstrate computer proficiency.
1. Demonstrate usage of hardware and software.
- 7-11 Maintain ethical behavior.
1. Identify current and emerging issues.
 2. Review and sign user policy.
- 7-12 Formulate database.
1. Design format for a database.
 2. Merge information from other programs.
- 7-13 Utilize a database for presentation/project.
1. Search for information.
 2. Enter data.
 3. Locate records.
 4. Edit information.
- 7-14 Assess information in a database.
1. Determine appropriateness and completeness of information.
 2. Assess core curriculum content for accuracy.
- 7-15 Evaluate database usage.
1. Assess ethical use of information.
 2. Critique effectiveness of database.
 3. Judge design layout.
 4. Evaluate integration of graphics and media.

Spreadsheet

- 7-16 Select appropriate technological tools to demonstrate computer proficiency.
1. Demonstrate usage of hardware and software.
- 7-17 Maintain ethical behavior.
1. Identify current and emerging issues.
 2. Review and sign user policy.
- 7-18 Examine spreadsheet characteristics.
1. Define spreadsheet vocabulary.
 2. Explore ways to display a spreadsheet in a word processing document.
- 7-19 Design a spreadsheet for a particular use.
1. Explore new uses for a spreadsheet.
- 7-20 Display data results in a variety of ways.
1. Propose new forms to display charts, graphs, and tables.
 2. Devise spreadsheets using other media forms.

- 7-21 Interpret spreadsheet results.
1. Design further research from spreadsheet projections.
 2. Critique procedures for summarizing data.
 3. Evaluate a spreadsheet for completeness and appropriateness.
- 7-22 Assess spreadsheet usage.
1. Judge ethics of appropriate documentation and etiquette.
 2. Measure the effectiveness of a spreadsheet.
 3. Develop a design layout that is complete and presentable.
 4. Assess core curriculum content for accuracy.

Desktop Publishing

- 7-23 Select appropriate technological tools to demonstrate computer proficiency.
1. Demonstrate usage of hardware and software.
- 7-24 Maintain ethical behavior.
1. Identify current and emerging issues
 2. Review and sign user policy.
- 7-25 Assemble and compose text.
1. Assess quality of composed text.
- 7-26 Develop and modify graphics.
1. Create a graphic using the style palette.
 2. Incorporate an imported image.
 3. Modify a graphic image.
- 7-27 Develop a design layout with text and graphics.
1. Integrate text and graphics in a document.
- 7-28 Assess document for publication.
1. Use appropriate ethics in documentation of sources.
 2. Select information and medium appropriate to project objectives.
 3. Assess core curriculum content for accuracy.

Telecommunications

- 7-29 Incorporate hardware and software telecommunication tools.
1. Demonstrate usage of hardware and software for telecommunications.
- 7-30 Maintain ethical behavior.
1. Practice appropriate etiquette and use of freeware/shareware.
 2. Review and sign user policy.
- 7-31 Integrate the use of video in telecommunications.
1. Use video and video conferencing to communicate globally.
- 7-32 Assess telecommunication usage.
1. Utilize telecommunication tools appropriately.
 2. Conduct a video conference.
 3. Assess the core curriculum content for accuracy.

Multimedia

- 7-33 Utilize various multimedia tools.
1. Synthesize knowledge of multimedia tools.
 2. Justify proper use and care of multimedia equipment.
 3. Integrate a variety of hardware and software to produce presentations/projects.

- 7-34 Maintain ethical behavior.
 1. Identify current and emerging issues.
 2. Demonstrate proper documentation of multimedia sources.
 3. Review and sign user policy.
- 7-35 Create a presentation/project.
 1. Investigate and gather data using a variety of multimedia tools.
 2. Organize useable data researched through multimedia.
 3. Construct a multimedia presentation/project.
 4. Critique appropriateness and completeness of a presentation/project.
- 7-36 Evaluate presentation/project.
 1. Exhibit appropriate documentation of sources.
 2. Determine the media effectiveness of a presentation/project.
 3. Verify required elements of layout design.
 4. Evaluate the integration of various multimedia in a presentation/project.
 5. Assess core curriculum content for accuracy.

GRADE LEVEL STANDARDS & BENCHMARKS

EIGHTH GRADE

Keyboarding

- 8-1 Select appropriate technological tools to demonstrate computer proficiency.
 1. Demonstrate usage of hardware and software.
- 8-2 Demonstrate respect for technological equipment.
 1. Identify current and emerging issues.
 2. Review and sign user policy.
- 8-3 Use menu functions for formatting.
 1. Utilize pull down menus.
- 8-4 Exhibit proficiency in keyboarding.
 1. Achieve appropriate speed of 30 words per minute with 95% accuracy.
 2. Demonstrate correct finger technique.

Word Processing

- 8-5 Select appropriate technological tools to demonstrate computer proficiency.
 1. Demonstrate usage of hardware and software.
- 8-6 Maintain ethical behavior.
 1. Identify current and emerging issues.
 2. Review and sign user policy.
- 8-7 Create document using advanced features.
 1. Use macros in the document.
 2. Develop a document that fully integrates all mastered word processing skills.
 3. Demonstrate software specific skills.
- 8-8 Demonstrate the management of documents.
 1. Edit a document using find/replace.
 2. Assess the document for completeness and appropriateness.
 3. Use import and export commands.
 4. Use commands that modify the word processing environment.

- 8-9 Assess a word processing document.
1. Revise a document.
 2. Publish a document.
 3. Assess core curriculum content for accuracy.

Database

- 8-10 Select appropriate technological tools to demonstrate computer proficiency.
1. Demonstrate usage of hardware and software.
- 8-11 Maintain ethical behavior.
1. Identify current and emerging issues.
 2. Review and sign user policy.
- 8-12 Develop a database.
1. Construct macros for entering data.
- 8-13 Use a database for presentation/project.
1. Retrieve information.
 2. Enter data.
 3. Locate records.
 4. Demonstrate how to format correct data.
- 8-14 Evaluate information in a database.
1. Assess information for appropriateness.
 2. Assess core curriculum content for accuracy.
- 8-15 Evaluate database usage.
1. Assess ethical use of information.
 2. Critique effectiveness of database.
 3. Judge design layout.
 4. Evaluate integration of graphics and media.

Spreadsheet

- 8-16 Select appropriate technological tools to demonstrate computer proficiency.
1. Demonstrate usage of hardware and software.
- 8-17 Maintain ethical behavior.
1. Identify current and emerging issues.
 2. Review and sign user policy.
- 8-18 Examine spreadsheet characteristics.
1. Define spreadsheet characteristics.
 2. Explore ways to display a spreadsheet in a desktop publishing and/or multimedia presentation.
- 8-19 Determine uses for the creation of a spreadsheet.
1. Construct new uses for a spreadsheet.
- 8-20 Produce data results in a variety of ways.
1. Critique methods for displaying results.
 2. Explore ways to use spreadsheets in desktop publishing and/or multimedia presentations/projects.
- 8-21 Interpret spreadsheet results.
1. Design further research from spreadsheet projections.
 2. Critique procedures for summarizing data.
 3. Assess the core curriculum content for accuracy.

- 8-22 Assess spreadsheet usage.
1. Critique the effectiveness of the spreadsheet.
 2. Evaluate the design layout for completeness and presentation.
 3. Assess core curriculum content for accuracy.

Desktop Publishing

- 8-23 Select appropriate technological tools to demonstrate computer proficiency.
1. Demonstrate usage of hardware and software.
- 8-24 Maintain ethical behavior.
1. Identify current and emerging issues..
 2. Review and sign user policy.
- 8-25 Assemble and compose text.
1. Produce text using linked text boxes.
- 8-26 Develop and modify graphics.
1. Produce graphics.
 2. Modify graphics for best visual presentation.
 3. Evaluate graphics as a part of an entire document.
- 8-27 Integrate text and graphics in a document.
1. Select layout using text wrap options.
- 8-28 Assess document for publication.
1. Use appropriate ethics in documentation of sources.
 2. Judge document in the effectiveness of medium and information to project objectives.
 3. Critique integration of text, graphics, and media in document.
 4. Assess core curriculum content for accuracy.

Telecommunications

- 8-29 Incorporate hardware and software telecommunication tools.
1. Demonstrate usage of hardware and software for telecommunications.
- 8-30 Maintain ethical behavior.
1. Identify current and emerging issues.
 2. Review and sign user policy.
- 8-31 Communicate with diverse groups on the Internet.
1. Exhibit ability to retrieve information from the Internet.
 2. Demonstrate use of e-mail attachments.
- 8-32 Assess telecommunication usage.
1. Post and retrieve information.
 2. Attach a document to an e-mail message.
 3. Assess core curriculum content for accuracy.

Multimedia

- 8-33 Utilize various multimedia tools.
1. Synthesize knowledge of multimedia tools.
 2. Justify proper use and care of multimedia equipment.
 3. Integrate a variety of hardware and software to produce presentations/projects.

- 8-34 Maintain ethical behavior.
 - 1. Identify current and emerging issues.
 - 2. Demonstrate proper documentation of multimedia sources.
 - 3. Review and sign user policy.
- 8-35 Create a presentation/project.
 - 1. Investigate and gather data using a variety of multimedia tools.
 - 2. Appraise useable data researched through multimedia.
 - 3. Construct a multimedia presentation/project.
 - 4. Critique appropriateness and completeness of a presentation/project.
- 8-36 Evaluate presentation/project.
 - 1. Exhibit appropriate documentation of sources.
 - 2. Determine the media effectiveness of presentation/project.
 - 3. Verify required elements of layout design.
 - 4. Evaluate the integration of various multimedia in a presentation/project.
 - 5. Assess core curriculum content for accuracy.

HERITAGE HIGH SCHOOL INDUSTRIAL TECHNOLOGY

Courses

- 447 I-Exploring Technologies .5 Credit
- 448 I-Engineering Technology I 1.0 Credit
- 449 I-Engineering Technology II 1.0 Credit
- 450 I-Engineering Technology III 1.0 Credit
- 454 I-Mechanical Drawing/Auto CAD I 1.0 Credit
- 455 I-Mechanical Drawing/Auto CAD II 1.0 Credit
- 460 I-Architectural Drawing/Auto CAD I 1.0 Credit
- 461 I-Architectural Drawing/Auto CAD II 1.0 Credit
- 462 I-Manufacturing Technology-Metals .5 Credit
- 463 I-Manufacturing Technology-Woods .5 Credit
- 464 I-Materials Technology II 1.0 Credit*
- 465 I-Machine Tool Technology .5 Credit
- 466 I-Principles of Technology 1.0 Credit*
- 467 I-Technology Education II .5 Credit*
- 480 I-Construction Technology 1.0 Credit
- 482 I-Construction Technology II .5 Credit*
- 486 I-Home Maintenance .5 Credit*
- 490 I-Technology Systems 1.0 Credit

***Note:** Courses under construction

Mission Statement

The Industrial Technology curriculum will provide students with the skills and processes, and terminology to enable them to adapt to the ever-changing technologies of our society.

Grades 6-12 Industrial Technology Exit Outcomes

All students will:

- υ Use and transfer technological knowledge and skills for life roles, i.e., family member, citizen, worker, consumer, and lifelong learner.
- υ Transfer knowledge from a variety of curricular areas to work-related situations.
- υ Apply technologies to think critically, express themselves creatively, and make decisions.
- υ Employ a systematic approach to solving a given problem by using resources and processes to create, maintain, and improve products, systems, and environments.
- υ Evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.
- υ Acquire the knowledge, skills, and behaviors that will help them to move successfully into the world of work and/or continuing education in order to pursue their career goals.

Graduation Requirements

In order to complete graduation requirements, all students must complete the following before a high school diploma will be granted: Two credits in Fine or Practical Arts. Any course in the Industrial Technology Department can fulfill the graduation requirement for Practical Arts.

Courses offered at Heritage High School

447 I-Exploring Technologies .5 Credit

Prerequisite: Open to 9th, 10th, 11th, and 12th graders

Description: This course provides students with an overview of the technology developments in today's world. They will use tools and equipment and participate in technology-related activities that are pertinent in our society. Lab Fee: \$10.

448 I-Engineering Technology I 1.0 Credit

Prerequisite: Open to 9th, 10th, 11th, and 12th graders

Description: This is the first course, in a series of three, that introduces students to the field of engineering. Topics to be explored include: methods used by engineers, team building, group problem solving, introduction to the scientific method, computer aided design, mechanical drawing, manufacturing processes, and mathematical theory. The course is project based where teams of students initiate a project and work it through to a usable product. Lab Fee: \$10.

449 I-Engineering Technology II 1.0 Credit

Prerequisite: Engineering Technology I

Open to 10th, 11th, and 12th graders

Description: This course takes a more in-depth look at the problem solving process. Students will refine and improve the ideas and concepts developed in Engineering Technology I using processes like the scientific method, cause and effect, and trial and error to determine the next steps to reach a particular goal. Various field trips and engineering competitions will be used to reinforce methods used in the course to solve real world problems. Lab Fee: \$10.

450 I-Engineering Technology III 1.0 Credit

Prerequisite: Engineering Technology II Open to 11th and 12th graders

Description: This course will be a continuation of Engineering Technology I and II, with a look at how engineering has affected our society. Students will explore various societal issues such as the environment, pollutants, and duty to self and mankind by concentrating on particular topics and working through to achieve specific solutions. They will also develop a career guide to assist them with becoming more aware of the different fields of engineering. Lab Fee: \$10.

454 I-Mechanical Drawing/AutoCAD I 1.0 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12th graders

Description: This course exposes students to more technical knowledge as it pertains to graphic communication. Using hand tools, students will develop skills in sketching, proper lettering, and pictorial drawings. Then, they will use the computer and the AutoCAD software to perform the same tasks. Upon successful completion of this course, students would have the basic knowledge needed to become a AutoCAD draftsman. Lab Fee: \$10.

455 I-Mechanical Drawing/AutoCAD II 1.0 Credit

Prerequisite: Mechanical Drawing/AutoCAD I Open to 11th and 12th graders

Description: This course goes into greater depth the processes used in mechanical drawing. Upon completion, students will use principles of mechanical drawing, and complete hand and computer drawing for each technique involved. They will also explore sectional, assembly, and other pictorial drawing styles. Lab Fee: \$10.

460 I-Architectural Drawing/AutoCAD I 1.0 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12th graders

Description: This course will take students through the complete process of designing a residential structure. Students will learn the principles behind construction and design techniques. They will also create drawings on a drawing board and on a computer using the AutoCad software. Lab Fee: \$10.

461 I-Architectural Drawing/AutoCAD II 1.0 Credit

Prerequisite: Architectural Drawing/AutoCAD I Open to 11th and 12th graders

Description: This course will concentrate on completing a set of drawings more fully. Students will take what they have learned in Architectural Drawing I and expand their knowledge to include: roof planning, electrical planning, heating and ventilation, and culminating this information with perspective drawings and renderings of a house design. They will create drawings using hand tools on a drawing board, and on a computer using the AutoCad software. Lab Fee: \$10.

462 I-Manufacturing Technology-Metals .5 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12 graders

Description: This course teaches methods used in fabrication, welding, plastics, and other materials of today's world. Students will be introduced to the tools, equipment, and procedures to participate in technology related activities that are pertinent to society. The course will also supply students with background knowledge on various industrial equipment and processes. Lab Fee: \$10.

463 I-Manufacturing Technology-Woods .5 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12th graders
Description: This course concentrates on the principles and processes used in woodworking technology. Students will design products which provide solutions to problems in a “hands on” environment. They will learn the proper identification and usage of hand and power tools, how to measure and plan for project designs, and the types of wood and characteristics. Lab Fee: \$10.

465 I-Machine Tool Technology .5 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12th graders
Description: This course provides an overview of the usage of machines, their functions, and safety precautions; hand tool and power tool identification; and parts specifications and operations. Students will be able to make connections across various content areas from “hands-on” activities. Lab Fee: \$10.

480 I-Construction Technology 1.0 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12th graders
Description: This course is designed to introduce students to the construction trades industry through practical experiences using new processes, problem-solving techniques, and “hands-on” activities. Lab Fee: \$10.

490 I-Technology Systems 1.0 Credit

Prerequisite: Exploring Technologies or Engineering Technology I Open to 10th, 11th, and 12th graders
Description: This course provides students with an overview of the technological developments of small engines, electronics, aerodynamics, personal transportation, commercial transportation, and recreational transportation throughout time. It also focuses on new technology systems and explores how they will be able to adapt to an ever-changing society. Lab Fee: \$10.

HERITAGE HIGH SCHOOL INFORMATION TECHNOLOGY

Courses

650 N-Computer Basics and Keyboarding .5 Credit

652 N-Computer Applications .5 Credit

654 N-Personal and Internet Computing .5 Credit

656 N-Programming I .5 Credit

658 N-Desktop Publishing .5 Credit

660 N-Multimedia .5 Credit

662 N-Programming II .5 Credit

664 N-Computer Information Technology .5 Credit

Mission Statement

All students will apply technology ethically and creatively to enhance lifelong learning in global experiences.

Grade 9-12 Information Technology Exit Outcomes

All students will independently and cooperatively:

1. Organize knowledge using technology skills.
2. Use appropriate resources to communicate with others.
3. Use research skills to investigate specific topics using various media.
4. Make decisions to effectively present, in a multimedia format, the information they have researched and the knowledge they have organized.
5. Review, assess, and revise presentations and projects.
6. Develop knowledge, ability, and responsibility in the use of resources and systems of technology.
7. Apply legal and ethical standards.

Graduation Requirements

In order to complete graduation requirements, all students must complete the following before a high school diploma will be granted: Two credits in Fine or Practical Arts. Any course in the Information Technology Department can fulfill the graduation requirement for Practical Arts.

650 N-Computer Basics and Keyboarding .5 Credit

Open to 9th, 10th, 11th, and 12th graders

Description: This introductory course allows students to develop skills in using a computer for personal and academic needs. Instruction is delivered through lectures and lab experiences. Major topics are computer components, keyboarding, word processing, spreadsheet, database, desktop publishing, multimedia, and telecommunications.

652 N-Computer Applications .5 Credit

Prerequisite: Computer Basics and Keyboarding or Teacher Recommendation

Open to 9th, 10th, 11th, and 12th graders

Description: Instruction is project-based using more advanced skills in word processing, spreadsheet, database, desktop publishing, multimedia, and telecommunications. Projects can include the use of technology skills to complete course work in other content areas.

654 N-Personal and Internet Computing .5 Credit

Prerequisite: Computer Basics and Keyboarding or Teacher Recommendation

Open to 9th, 10th, 11th, and 12th graders

Description: This course integrates personal computing skills with Internet applications. Students will design web pages, apply database research, and develop graphic creations. Note: It is highly recommended that students successfully complete Computer Applications before enrolling in this course.

656 N-Programming I .5 Credit

Prerequisite: Computer Applications or Teacher Recommendation

Open to 9th, 10th, 11th, and 12th graders

Description: This course introduces students to the concepts and skills necessary to develop computer software. These skills include sequential planning, flowcharts, problem solving, and critical thinking. The course uses the Basic programming language. Note: It is highly recommended that students successfully complete Geometry before enrolling in this course.

658 N-Desktop Publishing .5 Credit

Prerequisite: Computer Applications or Teacher Recommendation

Open to 9th, 10th, 11th, and 12th graders

Description: This course will merge the skills of writing with computer application software to create visually appealing and effective publications. Students will learn the uses of a desktop publishing program for both personal and professional needs.

660 N-Multimedia .5 Credit

Prerequisite: Computer Applications or Teacher Recommendation

Open to 9th, 10th, 11th, and 12th graders

Description: This course will develop skills related to multimedia use for both personal and professional needs. Students will integrate text, audio, video, graphics, scripts, and animations into multimedia presentations. A major project will be designed and created.

662 N-Programming II .5 Credit

Prerequisite: Programming I and Teacher Recommendation.

Open to 9th, 10th, 11th, and 12th graders

Description: This course continues the study of concepts and skills introduced in Programming I. Students will study the principles of object oriented programming and design to create customized computer programs.

664 N-Computer Information Technology .5 Credit

Prerequisite: Teacher Recommendation

Open to 10th, 11th, and 12th graders

Description: This course offers training in computer hardware troubleshooting and repair and networking fundamentals. Students will also learn advanced technology concepts. Note: This course offers training in preparation for A+ certification.

The last pages of the District Technology Plan is an appendix of the K-8 Technology Scope and Sequence for Grades K-8.

The Saginaw Township Community School's District Technology Plan is an evolving document. Updates will be published on the district's home page at www.stcs.org. For more information, contact:

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