



Gilbertsville – Mount Upton Central School

Gilbertsville-Mt. Upton Central School
693 State Highway 51
Gilbertsville, NY 13776

K-12 Technology Plan & Curriculum Framework

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District Mission Statement

The Gilbertsville-Mt. Upton Central School District is committed to an educational environment that assures equitable opportunity for all individuals to become responsible, productive members of society. We will encourage individual excellence by students of all ages that they may gain a lifelong enthusiasm for work and learning.

District Description and Background

Gilbertsville - Mount Upton Central School is a rural school district in Upstate New York with an enrollment of approximately 450 students in grades kindergarten through twelve.

Teaching staff consists of approximately 50 classroom teachers, plus teaching assistants, aides, support staff and administration for a total of approximately 120 staff members.

GMU prides itself on innovative courses, a high level of technological resources, and its knowledgeable teaching staff.

Current Technologies in Use at GMU

- All classrooms have at least one computer connected to the building-wide network.
- A building-wide wireless network is in place for increased accessibility to online resources.
- GMU is part of a high-speed, fiber optic based regional network.
- A Dynacom Integrated Information System provides multimedia programming to the classrooms via fiber optic cable. The system is scheduled for upgrade in the summer of 2010 as part of the district's building expansion project.
- An in-house announcement channel for students and staff to have up to date information about school news and events.
- Staff members have district-based e-mail accounts for professional communications with students, parents, and colleagues.
- Online software applications for administrative purposes, such as payroll, personnel management, and budget planning.
- A web-based student information system that allows for efficient student and special education management. Parents and students also have the ability to view student academic progress online.
- Mobile computer lab carts are used to extend capabilities in the areas of Internet-based research and multimedia presentations.
- Students are able to research up-to-date career information through web-based college and career planning software.
- Online curricula, textbooks, coursework and educational activities are used in all major subject areas across all grade levels.
- Interactive whiteboards, visual presenters and projectors are either installed in classrooms or available via mobile carts.
- Whenever possible, GMU capitalizes on the talents and knowledge of staff to train other staff members on various technology related topics.

Technology's Role in Education

Research continues to show that students learn faster and more deeply when aided by appropriate classroom technology. This is due to the highly interactive and visual nature of educational software that responds and adapts to the individual needs of each student through multiple learning channels.

Using the tools of technology, students and teachers can research, organize, integrate, and present the content that is the core of a school's curriculum. These tools also allow administrators to better guide and support this process.

Technology Plan Vision

The Gilbertsville-Mt. Upton Central School District has a longstanding and strong commitment to technology in education. Certainly a testament to this statement is the advanced technologies that were incorporated into the building that opened in the 1994 – 1995 school year and the ongoing support for district technology enhancement.

This plan supports more effective methods of teaching and learning using contemporary tools in all areas of the curriculum. It will help empower teachers in every classroom to meet the individual learning needs of each student in our diverse student body, and it will prepare them for a lifetime of learning and employment in the 21st century.

This technology plan is based on these belief statements:

We believe that the purpose of technology at Gilbertsville-Mt. Upton Central School is to improve instruction, learning and the educational environment.

We believe this can be accomplished by:

- setting common goals for the use and application of technology
- developing and increasing student and faculty competency levels
- setting processes and procedures for the acquisition, upgrade, utilization, and evaluation of software and hardware
- supporting these practices in a positive learning environment for staff and students
- having a system in place to support, monitor and adjust practices for best effect

As with our other plans for instruction, we see that there are characteristics that show positive applications of technology:

- incorporates and supports the common goals of the technology plan, staff development plan and the curriculum initiatives
- must be appropriately integrated into authentic learning opportunities
- focuses on improving academic achievement

District Technology Goals

- 1) To maintain a level of computer based technology that is up to date and accessible to all students and staff.
- 2) To elevate and maintain student and staff computer literacy so that they are able to access and use technology in a proficient manner as it relates to tasks at school, work and home.
- 3) To increase the level and sophistication of staff development in the use of instructional technologies.
- 4) To integrate the use of computers and other modern technologies with classroom instruction so that they become a part of regular use on a daily to weekly basis.
- 5) To integrate computer and online resources with the use of traditional library resources in the district libraries so students become capable of using a variety of information sources to develop solutions that address the needs of their education.

District Technology Assessments

- 1) The assessment of the “up to date” status of technology equipment and services at GMU will be made by comparing system capabilities / requirements of newly available equipment and software to equipment currently in the GMU inventory. Equipment and / or software replacement will take place on such a basis that the majority (over 75%) of computer equipment be no more than 4 years old, with the remainder of computer equipment to be no more than 7 years old. Guidelines for assessing other equipment and / or services (telecommunications, library services, etc.) will be determined on a cooperative basis between the technology, maintenance, library and other involved departments.
- 2) The level of student computer literacy will be assessed through the methods discussed in the Computer Literacy Foundations on pages 11 through 21.
- 3) Staff development in the use of technology will consist of scheduled training workshops facilitated by the GMU technology department, details of which are listed in the Professional Development section of this plan. Computer literacy of staff members will be assessed by tracking staff use of technology equipment, and by tracking the level and types of technology maintenance / repair requests.
- 4) Evaluation of the impact of professional development in the use of technology and its use as an instructional tool will be made based upon staff reporting of experiences with technology use in the classroom, as well as classroom observations.
- 5) Progress of the plan’s implementation and the impact of technology on student learning will be reviewed by the GMU administrative council on an ongoing basis.
- 6) Amendments to the technology plan will be made on an as needed basis (not to exceed three years) and will be filed with the designated technology plan approver and agents thereof. These amendments will consist of additions, deletions and revisions determined necessary by the GMU administration and the technology committee to better meet the goals outlined in this plan as changes in the state or nature of technology occurs.

Involvement and Communication

Communication of this technology plan and promoting involvement in the plan's implementation and future development will be accomplished using the following methods:

- Staff discussions and professional development
- Open houses
- Community workshops
- Regular information updates via the school newsletter and website

Professional Development

This section of the GMU technology plan is intended to provide a comprehensive framework for staff development in computer technology so that it may be better integrated into the instructional environment.

A catalog of computer equipment and services will be provided on a yearly basis to assist staff in planning for the use of technology in the classroom. This may include, but is not limited to:

- Computer labs
- Presentation equipment (projectors, visual presenters, interactive whiteboards, etc.)
- Wireless computing resources
- Central audio / video scheduling (Dynacom) services
- Library-based technology resources
- In-house training services
- BOCES provided workshops and training services
- Other workshops and / or training opportunities appropriate to the integration of computer technology in the instructional environment

In-house training will be provided to staff in the following areas:

- Use of the equipment mentioned in the section above
- Software germane to staff administrative tasks, such as grading and budget
- Office software (e.g. word processing, spreadsheets) in current use
- Safe use of online resources, including virus and malware awareness and prevention
- Other equipment or software used to further student learning

Identification of knowledge, skills, and attitudes needed by teachers will be accomplished by classroom observations and staff verbal and/or written feedback. For administrators, identification will be made on an ongoing basis by review in administrative council meetings.

All staff that work in an instructional capacity will be included for participation in in-house training sessions and staff development. Staff members wishing to attend BOCES workshops may do so upon review for applicability and approval by the appropriate administrator.

Access for All Learners

Gilbertsville - Mount Upton Central School is committed to maintaining reliable and efficient access to computer based resources for all students and staff. In support of this, GMU operates its technology infrastructure under the following conditions:

Minimum Infrastructure and Equipment

- At least one computer per classroom with network capability
- At least one active wired network connection or wireless equivalent per instructional area or office
- Wireless network coverage capable of servicing 90 percent or greater area of the school building, including 100 percent of core instructional areas
- Printer access for all instructional and office staff, with supervised access for all students
- At least two mobile lab carts per school with a minimum of 12 laptop computers for student use
- Network servers capable of handling file service, e-mail, and website traffic at highest usage times with minimal lag or interruption of service
- Network switch capacity to accommodate all active wired connections plus a reserve capacity of at least 10 ports
- Internet filtering appliance that conforms with the Children's Internet Protection Act (CIPA)

Local and Wide Area network configuration

- Network router configuration includes active firewall, anti-virus, and malware protection to prevent virus infiltration and hacking at the network level
- Servers and workstations have active firewalls, anti-virus, and anti-malware software to further prevent malicious activity
- Servers and workstations containing sensitive information are password protected to prevent unauthorized access. This includes, but is not limited to, all file servers and administrative office workstations
- Wherever possible, network traffic takes place at 100 Mbps to limit delays in accessing network resources – this level of bandwidth availability should never fall below 90 percent of the total number of district-owned workstations.

Access for All Learners (Continued)

Access to Software and Digital Content

Access to content via the internet shall be as open as possible unless it conflicts with the CIPA and/or the Gilbertsville - Mount Upton Central School Acceptable Use policies.

All staff shall have access to the software necessary to perform their job duties. Software requested for the education of students will be reviewed by the appropriate administrator for educational applicability and by the Technology Director for system compatibility prior to purchase.

Ensuring Accessibility

The district's Technology Director is responsible for ensuring that all district-owned computer equipment is in good working condition and that access to internal network and online resources are available to the fullest extent possible.

For shared equipment, such as mobile lab carts, the Technology Director will be responsible for scheduling use as fairly as possible based upon staff requests for the equipment.

Student- and Staff-Owned Computing Devices

GMU recognizes that the use of student- and staff-owned computing devices within the district is another way that accessibility to online resources can be increased. The district also recognizes that students and staff tend to use computing devices with which they have greater experience and are comfortable with.

Students and staff shall be allowed to use their computing devices on the district network under the following general guidelines:

- All computing devices used within the district are to be used first and foremost for educational purposes.
- Computing devices used within the district are subject to all current and future policies implemented by GMU regarding such use.
- Computing devices with network connectivity are to be registered on the district network via their physical network (MAC) addresses. Devices that are not registered for use on the network are denied access.

Formal rules regarding this use are currently under development during the 2009 – 2010 school year and will be written into administrative procedures and student handbooks before the end of June 2010.

Use of Assistive Technologies

“Assistive Technology (AT) includes both devices and services. A device is any item or piece of equipment used to maintain or improve the functional capabilities of a person with a disability.”

“AT services support people with disabilities or their caregivers to help them select, acquire, or use AT devices.”

-Washington Assistive Technology Alliance (wata.org/what-is-at.htm)

The role of Assistive Technology is to provide equality of access to curriculum features for students with a demonstrated difficulty in an area of academic processing. Technology is available to students in the district to help them accomplish tasks set forth in the Computer Literacy Foundations as well as General Education curricula.

Students will also be instructed in the awareness of new assistive technologies that are available in both secondary and post-secondary requirements.

Skills Taught

Assistive Technologies

Keyboarding

Large font or high contrast key labels
AlphaSmart keyboard for younger students
OnScreen keyboard
Voice recognition

Pointing Devices

Trackball
Switch adapted Mouse / Trackball
Joystick
Touch screen

Word Processing,
Spreadsheets,
E-mail

Text to speech
Word prediction
Voice recognition
Spelling and grammar checking

Curriculum Integration

Language Arts

Alternate keyboard and pointing devices
Text to speech
Paper to electronic conversion (Scanner use)
Organization techniques and software
Bookmaking software
Presentation software
Computer and audio books

Math, Science, Social
Studies

Spreadsheet and database software
Skill-based drill software
On screen calculator
Video microscope
Topic-based research and fact software
Problem solving software

Acceptable Use and Internet Safety

Policy regarding the acceptable use of computer based and online resources are covered under Gilbertsville - Mount Upton Central School's Board of Education policies 6490 and 8271.

In summary, these policies state that computer based and online resources are to be used in a professional manner for school related activities and operations only. Usage that contradicts GMU policy or is illegal is prohibited.

Enforcement of acceptable use is ensured in the following ways:

- A content filtering appliance is in place in accordance to the Children's Internet Protection Act (CIPA) to monitor overall Internet access and to block access to sites of a questionable or illegal nature.
- Student use of computers or the Internet is supervised by GMU staff members to ensure that they are used in a manner commensurate with the educational environment.
- Staff e-mail is archived and can be accessed to ensure legal and ethical use.

Instruction of elementary students in the safe use of the Internet currently takes place as part of elementary computer classes. Instruction of middle/high school students and staff takes place as an ongoing dialogue between the GMU technology department, administration, faculty and students.

Formal Internet safety instruction for middle/high school students and staff is scheduled for development throughout the 2009 – 2010 school year, with implementation of said instruction no later than October of the 2010 – 2011 school year.

K-12 Computer Curriculum Framework (Foundations)

The following curriculum framework begins with some suggested outcomes, and then continues with a listing of skills to be taught. Some suggested instructional and assessment strategies follow. Some recommended learning resources are also listed.

This framework was adapted from guidelines originally proposed on the web site of the government of British Columbia's Educational Services Curriculum Branch:
(<http://www.est.gov.bc.ca/curriculum>)

The framework by grade is divided into 3 main sections. This is due to the different computer instruction environments prevalent in elementary, middle school, and high school.

The breakdown of these environments is as follows:

K-6: Instruction is performed in the Elementary Computer Lab as an elementary "special". Instruction takes place primarily as "pure" computer instruction (not directly related to regular classroom instruction), with integration to classroom learning taking a strong secondary role.

7/8: Instruction takes place as an integrated element of regular courses.

9-12: Computer instruction currently takes place as an integrated element of regular courses and computer related electives, when available.

Integration Strategies

In order to insure that technology will be integrated into curriculum and instruction, the following strategies will be used:

- Curriculum mapping will be used to determine areas where technology can be implemented to further improve instruction.
- Superintendent's conference days contain technology components, where new uses of computer resources can be introduced and experiences with technology in the classroom can be shared.
- After-school sessions at GMU and BOCES workshops provide further training in the use of technology as part of instruction.

Curriculum Framework, Section 1: Elementary

Computer Literacy Foundations - Grades K - 2

Prescribed Learning Outcomes

It is expected that students will:

- Identify and describe the effects of technology tools that communicate information in the home and school.
- Demonstrate a willingness to use technology tools.
- Enter information on a computer and print it.
- Demonstrate a willingness to work cooperatively when using technology tools.
- Use appropriate terminology to describe the parts of a computer system.
- Demonstrate the proper care and safe use of equipment
- Identify occupations in the community that involve the use of information technology.

Skills Taught

Nature of Instruction

| | |
|------------------|--|
| Keyboarding | Kindergarten: letter recognition 1 st Grade: Keyboard layout and functions 2 nd Grade: basic typing |
| Pointing Devices | Basic operations (click, double-click, drag and drop) are taught then reinforced. |
| Word Processing | 1 st and 2 nd Grade: Basic writing skills are taught in the classroom and reinforced in the lab. |
| E-mail | 1 st and 2 nd Grade: Password use and login process are taught and practiced; simulated e-mails are typed and sent, received and replied to. |
| Internet Use | 1 st and 2 nd Grade: Basic browser skills; access to child-specific web sites; simulated web addresses are typed. |

Suggested Instructional Strategies

Children are surrounded by technology tools at home and at school. They need to know how to use these technologies so that they can communicate more effectively with others.

- Have students work individually to identify and match picture vocabulary cards with the parts of a computer (e.g., mouse, keyboard, monitor, printer). Discuss the proper care & safe use of this equipment with students.
- To help students develop their understanding of how information technology is used in the workplace, ask them to create collages showing people using a variety of technology tools (e.g., computers, telephones, fax machines, video cameras)

Suggested Assessment Strategies

In the early primary years, young children begin to explore technology formally and to acquire fundamental skills for handling technology tools. Playing games and using simple graphics and text programs with partners provide children with the opportunity to gain confidence using technology tools. By observing students as they work and listening to their conversations, teachers can assess knowledge, understanding, and care of technology tools, as well as ability to work cooperatively with others.

- Listen to students' conversations as they work with technology tools. Note the extent to which they use terms correctly (e.g., *click, select, space bar, enter, return, escape, cancel, icon, print*)
- Observe students as they use software. Note the extent to which they are able to:
 - Use a mouse to point, select, and drag.
 - Access menus and a tool or button bar or palette.
 - Print documents.
- While students are working with a computer, assess their knowledge of the basic components of a computer system. Note the extent to which they are able to:
 - Accurately identify the parts.
 - Explain the general purpose or function of each part.
 - Use correct terminology.
- Conference with students to discuss their collages showing people using technology tools. To assess their knowledge, ask questions such as:
 - What can you tell me about the technology tools you have included in your collage?
 - What is the purpose of each tool?
 - Can you think of some tools that you have not included?
 - Which technology tools have you used before? How were they useful to you?

Recommended Learning Resources

Print Material

Computers: A Visual Encyclopedia

Software / Online Resources

Kindergarten to 2nd Grade: DIBELS (dibels.uoregon.edu, www.teachers.cr.k12.de.us/~galgano)

Kindergarten: ABCya (www.abcya.com)

1st Grade: Read, Write & Type

2nd Grade: Learn To Type Jr., Type Through Time, Bernie's Typing Travels, Kid Pix Studio Deluxe

1st - 2nd Grade: Type to Learn Jr., Read, Write & Type, Microsoft Word, Microsoft Internet Explorer

Computer Literacy Foundations - Grades 3 - 4

Prescribed Learning Outcomes

It is expected that students will:

- Enter, save, and retrieve information using a computer or other information technology tools.
- Use word processing and graphics software to present ideas.
- Demonstrate an understanding of data storage practices.
- Describe how storage media are used.
- Use appropriate terminology when using technology tools.
- Demonstrate a willingness to work cooperatively when using technology tools.
- Identify technology tools used in the home, school, and community.
- Demonstrate the proper care and safe use of equipment

Skills Taught

Level of Instruction

| | |
|------------------|---|
| Keyboarding | Introduction of typing tutorial software; home row skills are introduced. |
| Pointing Devices | Additional selecting and editing skills are taught in conjunction with word processing. |
| Word Processing | Writing skills taught in the classroom are reinforced in the lab. |
| E-mail | Concepts taught in K - 2 are reinforced and practiced. |
| Internet Use | Basic browser skills taught in K - 2 are reinforced and practiced; Search engine skills are introduced and gradually increased as students develop language skills. |
| Presentations | Introduced to basic graphics / presentation software; basic presentation "slides" are constructed. |

Suggested Instructional Strategies

At this level, students become more proficient and self-reliant in their use of information technology. They are introduced to the concepts of safety and security in the use of technology tools. They become aware of the importance of developing the skills required to use these tools in their daily lives.

- Discuss with students the safe and unsafe uses of technology tools. Use role-playing to reinforce these concepts
- Have students launch a word processing program, write a story, save it, and print it. Encourage students to write letters using the computer, and send them to classmates and pen pals.

Suggested Instructional Strategies (continued)

- As part of a project, demonstrate how to retrieve information from an online or CD-ROM based encyclopedia and then invite students to try it. A demonstration of how to retrieve information using an Internet search engine or library database system can also be demonstrated by the instructor, then performed and practiced by students.

Suggested Assessment Strategies

Students improve their basic skills as they create electronic documents such as stories, pictures, and reports. The teacher can assess student's abilities to organize, store, and retrieve information by observing them as they create and manipulate text, graphics, and other data. Observation as to how students save their work is also useful.

- As students use various software, note the ease and confidence with which they are able to:
 - Launch (open) applications.
 - Close (exit) applications.
 - Access tool bars, menus, and help documents.
 - Use the features of the program (e.g., align and format text, move the cursor within the document, insert, drag, and delete text).
 - Save and print documents.
- Listen to students' conversations as they work. Note the extent to which they use accurate terminology
- Observe students as they work and listen to their conversations. Note the extent to which they:
 - Take turns communicating
 - Share materials
 - Share their own ideas and use the ideas of others

Recommended Learning Resources

Print Material

Computers: A Visual Encyclopedia

Software / Online Resources

Inspiration

Microsoft Word 2002 (as part of the Microsoft Office XP suite)

Microsoft Internet Explorer

Kid Pix Studio Deluxe

Computer Literacy Foundations - Grades 5 - 6

Prescribed Learning Outcomes

It is expected that students will:

- Manipulate electronic documents using a variety of tools.
- Demonstrate an understanding of the need for the security and privacy of electronic information.
- Use appropriate terminology when using technology tools.
- Demonstrate a concern for the need to take care of technology resources and materials.
- Demonstrate an awareness of health and safety issues when using information technology.
- Demonstrate a willingness to be self-reliant when using information technology tools.
- Identify role models in the community who use technology tools, being careful to consider all individuals, regardless of gender, culture, and ability.

Skills Taught

Level of Instruction

| | |
|------------------|---|
| Keyboarding | Skill continues to be practiced and refined using typing tutorial software; keyboard “skins” are introduced to promote touch-typing. |
| Pointing Devices | Skill is now inherent with computer use. |
| Word Processing | Writing skills taught in the classroom are reinforced; research projects utilizing multiple computer skills are introduced. |
| Presentations | Slides are constructed with more graphics, animation and sound |
| Spreadsheet | Data entry and math functions are introduced. |
| E-mail | Concepts previously taught are practiced and refined. |
| Internet Use | Browser skills are practiced and increased; research assignments are introduced. Use of library databases is introduced and practiced |
| Troubleshooting | Use of help documentation and logic to solve more complex software & hardware problems. |

Suggested Instructional Strategies

Students need to become aware of ethical issues related to the use of information technology (e.g., copyright, plagiarism, privacy, the use of on-line resources). Their exploration of these issues will help them understand how to use the tools responsibly.

- Lead a class discussion about the problems created by computer viruses. Have students suggest practices for avoiding viruses and dealing with a virus "infection" after one has occurred.

Suggested Instructional Strategies (continued)

- As part of a character education unit, discuss some ethical considerations involved in using electronically retrieved information. To confirm their understandings, have students create a list of references or a bibliography that credits the works and on-line resources accessed for a project.
- As part of personal planning, have students work in cooperative groups to create a list of rules to follow when creating passwords. Suggest that they post these rules beside their computers in the classroom.
- Have students develop a list of ways to find help when faced with a problem in using information technology tools (e.g., ask a peer, consult help screens, read the manual or guidebook).

Suggested Assessment Strategies

As students explore career opportunities in the field of information technology, they become aware of the need for sophisticated skills and for the responsible use of technology tools. Students demonstrate their abilities to use software features effectively by creating and modifying electronic documents. The extent to which they work responsibly can be assessed through observation as they use sources such as the Internet.

- With the class, generate and post a list of suggestions for problem solving when using technology tools (e.g., use on-line help, ask a peer, refer to a manual). Note the extent to which students are self-reliant and able to assist others when using technology tools.
- Discuss the use and potential misuse of information technology tools, including issues such as privacy of information, copyright, and plagiarism. To assess students' understanding, ask:
 - What are some examples of how information technology tools can be misused?
 - What should you do if you find information belonging to someone else (e.g., storage media, passwords)?
 - Why is it important to cite the sources of your information?
- Discuss proper etiquette or conduct when using electronic messaging systems. Have students save and print their e-mail correspondence and use their collections as a basis for self- and peer assessment. Look for evidence of appropriate content and language.
- Observe students as they use a keyboarding program to improve speed and accuracy. Use a checklist to assess students' proficiency with specific skills (e.g., correct posture, eyes on the copy, use of home row keys, correct finger reaches, use of numeric keypad). Students may use the same checklist to conduct peer assessments.
- Assess students' knowledge of spreadsheets by observing how they organize and enter data; have students print out completed sheets for further review.

Recommended Learning Resources

Print Material

Computers: A Visual Encyclopedia

Software / Online Resources

Mavis Beacon Teaches Typing

Microsoft Word, Excel, and PowerPoint (as part of the Microsoft Office 2007 suite)

Windows Movie Maker

Microsoft Internet Explorer

Kid Pix

Inspiration

Curriculum Framework, Section 2: Middle School

Computer Literacy Foundations - Grade 7 - 8

Prescribed Learning Outcomes

Upon exit from the 8th Grade, it is expected that students will:

- Work cooperatively using information technology tools.
- Access information using a variety of on-line information tools.
- Identify and apply a variety of software based on specific needs.
- Apply troubleshooting strategies when using technology tools.
- Demonstrate an understanding of software compatibility when using technology tools.
- Practice the socially responsible use of electronic information.
- Demonstrate an awareness of the impact of information technology on society.

Throughout 7th and 8th Grade, it is expected that students will:

- Learn the necessary computer skills to succeed in middle and high school classes.
- Use a computer as an effective tool for learning.
- Enter, save modify and retrieve information using a variety of software.
- Use appropriate keyboard techniques to enter information into a computer.
- Practice behaviors that demonstrate self-reliance when using technology tools.
- Demonstrate a concern for the responsible use of technology and resources.

Skills Taught

Level of Instruction

| | |
|------------------|--|
| Pointing Devices | Skill is inherent with computer use. |
| Word Processing | Advanced editing and formatting skills are taught. Research paper and letter formats are taught. |
| Presentations | Construction of presentations with animation, sound and video are continued as part of the normal classroom environment. |
| Spreadsheet | Advanced data entry techniques, formulas and functions are introduced. |

Suggested Instructional Strategies

Students develop an understanding of the impact of information technology on their daily lives, careers, and society. They use technology tools in their daily lives to solve problems at school and at home. Students become aware of the need to maintain and manage data and technology resources responsibly.

- Have students write and edit various business letters and research papers. Discuss the elements necessary to convey content in an easily understood manner.

Suggested Assessment Strategies

Students broaden their knowledge as they are introduced to new software and more powerful techniques in the manipulation of information, and are introduced to the inner workings of stand-alone computers and the basics of computer networks.

- Assess students' knowledge of word processing, spreadsheets, and computer-based research by observing how they organize and enter data.
- Assess technology literacy of exiting 8th grade students with a minimum of one in-class observation of an assignment using online research and word processing software, and one observation of an assignment using presentation software.

Recommended Learning Resources

Software / Online Resources

Microsoft Word, Excel, and PowerPoint (as part of the Microsoft Office 2007 suite)
Windows Movie Maker
Microsoft Internet Explorer
Inspiration

Curriculum Framework, Section 3: High School

Grades 9-12

Prescribed Learning Outcomes

Upon graduation from Gilbertsville-Mt. Upton Central School, it is expected that students will:

- Demonstrate proficiency in the use of technology tools commensurate with the skills necessary to enter and succeed in the world of work and higher education.
- Demonstrate the ability to formulate questions and to use a variety of sources and tools to access, capture, and store information.
- Use appropriate information technology terminology.
- Create and modify documents, spreadsheets, and multimedia presentations.

Computer-based or -related courses (offered as scheduling permits):

- Business Communications
- Computer Aided Design
- Digital Publishing
- Digital Photography
- Network Technology

Outcomes, instruction, and assessment for these courses are accessible as part of various GMU curriculum listings. Descriptions of these courses are listed below:

Business Communications

This course is designed to give students a basic knowledge of computer applications and how they fit into business systems.

Computer Aided Design

This is an introductory course to design and drafting using AutoCAD software. Students are instructed in two-dimensional drawing and three-dimensional modeling techniques.

Digital Publishing

Students will be instructed in the use of computer programs and technologies integral to the area of publishing, in the form of printed material and Internet web pages. Instruction in digital photo and graphic editing, and web page publishing are included.

Digital Photography

Students are instructed in the use of digital still cameras and photo editing as they relate to traditional photography techniques and artistic composition.

Network Technology

This course is designed to give students instruction in the theories that govern working networks and hands-on experience in designing, configuring and testing a computer network.

GMU Technology Planning Projected 3 Year Budget Cycle

All funding for In-House training and purchases, and IPA (Installment Payment Agreement) payments will be provided through appropriations in the GMU general budget. Grant funds, when available, will be used to purchase additional equipment and/or training.

2010-2011

Staff Development: In-House Training / Transition training with new equipment
GMU Intranet Resources
BOCES Training
BOCES Online Resources

Projected Cost: \$15,000

Hardware Acquisition: Broome IPA Purchases:
Replacement of classroom computers
Additional mobile lab computers
Interactive whiteboards
Visual presenters
Multimedia projectors
Wireless networking equipment

Projected Cost: \$47,000

In-House Purchases:
Replacement of Internet filtering appliance
Computers & peripherals to account for replacements due to attrition
Interactive whiteboards
Visual presenters
Multimedia projectors

Projected Cost: \$10,000

Software Acquisition: Student Information System updates & support
Library software updates & support
Updates of Internet filtering software
Updates of Workstation control and tracking software
Security software (anti-virus, anti-malware) updates
Other software upgrades as necessary

Projected Cost: \$15,000

Internet: Regional network service via BT-BOCES

Projected Cost: \$35,000

GMU Technology Planning Projected 3 Year Budget Cycle (Continued)

2011-2012

Staff Development: In-house Training / Transition training with new equipment
GMU Intranet Resources
BOCES Training
BOCES Online Resources

Projected Cost: \$15,000

Hardware Acquisition: Broome IPA Purchases:
IPA Service Payments

Projected Cost: \$47,000

In-House Purchases:

Computers & peripherals to account for replacements due to attrition.

Interactive whiteboards

Visual presenters

Multimedia projectors

Projected Cost: \$7,500

Software Acquisition: Enrichment - Core Areas
Remedial Software - Core Areas
Student Information System updates & support
Library software updates & support
Updates of Internet filtering software
Security software (anti-virus, anti-malware) updates
Other software upgrades as necessary

Projected Cost: \$15,000

Internet: Regional network service via BT-BOCES

Projected Cost: \$35,000

GMU Technology Planning Projected 3 Year Budget Cycle (Continued)

2012-2013

Staff Development: In-house Training / Transition training with new equipment
GMU Intranet Resources
BOCES Training
BOCES Online Resources

Projected Cost: \$15,000

Hardware Acquisition: Broome IPA Purchases:
IPA Service Payments

Projected Cost: \$47,000

In-House Purchases:

Computers & peripherals to account for replacements due to attrition.

Interactive whiteboards

Visual presenters

Multimedia projectors

Projected Cost: \$7,500

Software Acquisition: Enrichment - Core Areas
Remedial Software - Core Areas
Student Information System updates & support
Library software updates & support
Updates of Internet filtering software
Security software (anti-virus, anti-malware) updates
Other software upgrades as necessary

Projected Cost: \$15,000

Internet: Regional network service via BT-BOCES

Projected Cost: \$35,000