

TECHNOLOGY EDUCATION

PHILOSOPHY

The faculty of Mount de Chantal Visitation Academy believes that each student learns in her own way, dependent upon family support, peer interaction, and the teaching staff, but mostly upon the student herself. Each day the student makes the decision to listen or not to listen, to participate or not to participate, to learn or not to learn, to internalize or not to internalize, to excel or not to excel, to master or not to master.

A skills-oriented curriculum, with emphasis on real-world sequential computer skill sets that focus on the introductory, intermediate, mastery, and challenge levels, will give each student the opportunity to internalize those skills at whatever level the student feels most successful and whatever level the computer faculty feel the student was most challenged. Because a Mount de Chantal education is based on the belief that a liberal arts education at the elementary and secondary levels is essential, our curriculum will also stress educating students about the relevant issues found in a highly technological world such as privacy, security, and ethics.

Therefore, the computer faculty at Mount de Chantal Visitation Academy accepts the mission of preparing each student to enter a new world – one that is technology driven, problem solving oriented and dependent upon critical thinking and creativity. We hope to achieve these goals via a stimulating interdisciplinary, project-based, real-world driven curriculum that incorporates resources such as the entire school, the home, the community, and the world (through the use of Internet driven technologies).

Computer and technology skills are the essential responsibility of teachers of all disciplines. Our standards and benchmarks are based upon the National Technology Standards and are correlated into a curriculum that addresses each standard skill by skill. The curriculum incorporates both group and individual projects, which gives each student the opportunity to challenge herself to the best of her ability and fortitude.

Because technology is dynamic, the skills, standards, and benchmarks are also dynamic. We must celebrate the ability, flexibility, willingness, and enthusiasm to change. Our small numbers and our positive outlook towards lifelong learning make it easier for educators to collaborate and tackle the tasks involved in bringing new skills to students. Therefore we can most certainly guarantee that not only will we strive to implement this curriculum, but we will also strive to extend and change this curriculum as both the technology and our skill sets change.

STANDARDS

The National Technology Foundation Standard (NTFS) for Students is the leading guiding principle for technology education; it was developed by the International Society for Technology in Education (ISTE). The technology foundation standards for students are divided into six broad categories. Within Mount de Chantal's curriculum, standards within each category are introduced, reinforced, and mastered by students. These categories provide a framework for linking performance indicators within the Profiles for Technology Literate Students to the

standards. Mount de Chantal Visitation Academy has used these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

Technology Foundation Standards for Students

- 1 Basic operations and concepts
 - Students demonstrate a sound understanding of the nature and operation of technology systems.
 - Students are proficient in the use of technology.
- 2 Social, ethical, and human issues
 - Students understand the ethical, cultural, and societal issues related to technology.
 - Students practice responsible use of technology systems, information, and software.
 - Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
- 3 Technology productivity tools
 - Students use technology tools to enhance learning, increase productivity, and promote creativity.
 - Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- 4 Technology communications tools
 - Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
 - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- 5 Technology research tools
 - Students use technology to locate, evaluate, and collect information from a variety of sources.
 - Students use technology tools to process data and report results.
 - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
- 6 Technology problem-solving and decision-making tools
 - Students use technology resources for solving problems and making informed decisions.
 - Students employ technology in the development of strategies for solving problems in the real world.

BENCHMARKS AND ASSESSMENTS

Core Courses

First Grade

Course Description:

In first grade, students are introduced to the computer and its proper usage. Students will be taught to identify and name individual computer parts such as the mouse, keyboard, monitor and computer. The primary focus of the class will be teaching the students mouse control through the use of programs such as KidPix and MS Paint.

Benchmarks:

By the close of the First Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Use a keyboard to input information using letters, numbers, arrow key, and delete key; begin to use left/right hand position.
- Use a mouse to click and drag.
- Start and exit programs as well as locate files.
- Be introduced to computers and their proper usage.
- Be taught common external individual computer parts such as the mouse, keyboard, monitor, and computer.

NTFS Standard 2: Social, ethical, and human issues

- Work cooperatively with peers when using technology in the classroom.
- Demonstrate positive social and ethical behaviors when using technology.
- Practice the responsible use of technology systems and software.

NTFS Standard 3: Technology productivity tools

- Create developmentally appropriate multimedia products with support from teachers, family members, or student partners
- Use a variety of media and technology resources for directed and interdependent learning activities.

NTFS Standard 4: Technology communications tools

- Mount de Chantal Visitation Academy begins introduction to this standard in the Third Grade.

NTFS Standard 5: Technology research tools

- Use developmentally appropriate multimedia resources (i.e. interactive books and educational software) to support learning

NTFS Standard 6: Technology problem-solving and decision-making tools

- Mount de Chantal Visitation Academy begins introduction to this standard in the Second Grade.

Assessments:

By the close of the First Grade, the student will:

- Use the keyboard to input information using letters, numbers, arrow keys, and delete key. The student begins to use left-right hand position. The student uses a mouse to click and drag. The student starts and exits programs as well as locates files.
- Demonstrate the ability to work cooperatively on a computer project with a learning partner as well as an understanding of the appropriate use of computers.
- Use word processing software to type words and/or sentences.
- Use drawing and graphics programs to express ideas.
- Participate as a group in locating information in a variety of developmentally appropriate technology resources (interactive books, interactive software, and elementary multimedia encyclopedias).

Second Grade

Course Description: In second grade, students will expand upon what they learned in 1st Grade computers. They will be taught to identify and name individual computer parts such as the mouse, keyboard, monitor and computer. The primary focus of the class will be learning proper keyboard usage including the proper position of each key. Mouse control will be reinforced through the use of programs such as KidPix and MS Paint.

Benchmarks:

By the close of the Second Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Use input devices (i.e. mouse, keyboard, and remote control) and output devices (i.e. monitor and printer) to successfully operate computers, VCRs, DVDs, and other technologies.
- Use a variety of media and technology resources for directed and interdependent learning activities.
- Communicate about technology using developmentally appropriate and accurate terminology.
- Handle and use diskettes and CD's with care

NTFS Standard 2: Social, ethical, and human issues

- Work cooperatively with peers when using technology in the classroom.
- Demonstrate positive social and ethical behaviors when using technology.
- Practice the responsible use of technology systems and software.
- Recognize an individual's rights of ownership to computer-generated work.

NTFS Standard 3: Technology productivity tools

- Create developmentally appropriate multimedia products with support from teachers, family members, or student partners
- Use a variety of media and technology resources for directed and interdependent learning activities.
- Use a word processing program, to create, save, print and open existing files.
- Enter data and create graphs electronically as a group activity.
- Identify and use electronic drawing/paint programs to combine graphics and text.

NTFS Standard 4: Technology communications tools

- Mount de Chantal Visitation Academy begins introduction to this standard in the Third Grade.

NTFS Standard 5: Technology research tools

- Use developmentally appropriate multimedia resources (i.e. interactive books and educational software) to support learning
- Discuss, as a group, how the Internet and email are tools to gather and locate information.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Begin to identify the different purposes among software applications (i.e. puzzles, writing tools, graphing tools).

Assessments:

By the close of the Second Grade, the student will:

- Demonstrate correct keyboarding posture and finger placement for the home row and upper and lower case letters.
- Use the skill of right clicking with a mouse.
- Handle and use diskettes and CD's with care.
- Demonstrate competency with the standard remote control operating procedures.
- Communicate about technology using developmentally appropriate and accurate terminology.
- Demonstrate the ability to work cooperatively on a computer project with a learning partner as well as an understanding of the appropriate use of computers.
- Recognize an individual's rights of ownership to computer-generated work.

Third Grade

Course Description:

In third grade, students will continue to master keyboarding skills to include increasing speed and accuracy. By the end of the year, they should be able to type by dictation with proficiency. They are expected to be able to identify and name individual computer parts such as the mouse, keyboard, monitor and computer and will be introduced to the insides of a computer. They will also complete projects using KidPix, Creative Writer, and other software.

Benchmarks:

By the close of the Third Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate with some proficiency proper finger placement for all keys on the keyboard and proper posture when using computers.
- Use a variety of media and technology resources for directed and interdependent learning activities.
- Communicate about technology using developmentally appropriate and accurate terminology.
- Be able to identify basic components inside a computer.

- Handle diskettes, CDs, zip disks, and other computer equipment with care.
- Be introduced to technology devices other than personal computers and the similarities between these devices and standard computers.

NTFS Standard 2: Social, ethical, and human issues

- Work cooperatively with peers when using technology in the classroom.
- Demonstrate positive social and ethical behaviors when using technology.
- Practice the responsible use of technology systems and software.
- Recognize that the copyright law protects the electronic products that a person, group, or company has created.

NTFS Standard 3: Technology productivity tools

- Use a word processor to enter text with some formatting (e.g., boldface, underlining and font size), cut and paste, spell check, and edit text.
- Begin to enter and graph data electronically.
- Organize and arrange information for a multi-media presentation as a group activity.

NTFS Standard 4: Technology communications tools

- Understand the use of email as a communication tool.
- Participate in a curriculum-based telecommunications project as a group activity.

NTFS Standard 5: Technology research tools

- Locate information in a variety of developmentally appropriate technology resources (interactive books, educational software and elementary multimedia encyclopedias) for a curriculum-based project or activity (i.e. Science Fair).

NTFS Standard 6: Technology problem-solving and decision-making tools

- Discuss, as a group, and begin to use appropriate technology tools to perform typical academic tasks (i.e. graphing/spreadsheet applications to graph data for science projects, word processor for typing a paper, spreadsheet for organizing data, the Internet for finding images and other relevant data, etc).

Assessments:

By the close of the Third Grade, the student will:

- Demonstrate with some proficiency proper finger placement for all keys on the keyboard.
- Regularly use the skill of right clicking with a mouse.
- Handle and use diskettes, CD's, zip disks and other computer equipment with care.
- Communicate about technology using developmentally appropriate and accurate terminology.
- Demonstrate the ability to work cooperatively on a computer project with a learning partner as well as an understanding of the appropriate use of computers.
- Recognize that copyright laws protect the electronic products a person, group, or company has created.
- Use a word processor to enter text with some formatting (e.g., boldface, underlining, and font size), cut and paste, spell check, and edit text.

- Be able to enter and graph basic data electronically.
- Organize and arrange information for a multimedia presentation as a group activity.
- Demonstrate an understanding of the basics, purpose and use of email.
- Demonstrate basic understanding of computers as a communication tool through the completion of a group curriculum-based telecommunications project.
- Demonstrate basic proficiency of locating and researching information using a computer and the Internet through the completion of a curriculum-based project or activity.

Fourth Grade

Course Description:

In Fourth grade, students will complete keyboarding classes. They are expected to be able to identify and name individual computer parts such as the mouse, keyboard, monitor and computer and will be taught about how individual computer components work such as the CPU, memory, hard drive, printers, and scanners. They will be introduced to more advanced functions within word processing and presentation software. They will also complete projects using KidPix, Creative Writer, and other software.

Benchmarks:

By the close of the Fourth Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate with some proficiency proper finger placement for all keys on the keyboard and proper posture when using computers.
- Demonstrate a sound understanding of the nature and operation of technology systems; and
- Demonstrate proficiency in the use of technology.

NTFS Standard 2: Social, ethical, and human issues

- Demonstrate understanding of the ethical, cultural, and societal issues related to technology.
- Practice responsible use of technology systems, information, and software.

NTFS Standard 3: Technology productivity tools

- Use technology tools to enhance learning, increase productivity, and promote creativity.
- Use productivity tools to collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works.

NTFS Standard 4: Technology communications tools

- Use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences
- Use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

NTFS Standard 5: Technology research tools

- Use technology to locate, evaluate, and collect information from a variety of sources.
- Use technology tools to process data and report results.

- Evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for solving problems and making informed decisions.
- Employ technology in the development of strategies for solving problems in the real world.

Assessments:

By the close of the Fourth Grade, the student will:

- Demonstrate with some proficiency proper finger placement for all keys on the keyboard.
- Demonstrate an understanding of the roles of key internal and external computer components and use appropriate vocabulary to identify components.
- Identify the need for acceptable use policies and identifies violations of the copyright law.
- Recognize correct use of copyrighted materials in electronic products.
- Use a word processing program to create and format a document (e.g., paragraph, tabs, justification, margins) and review cut and paste, spell check and text formatting.
- Enter data into a prepared spreadsheet to perform calculations and recognize the changes that occur.
- Create a multi-media project as a class group activity.
- Participate in curriculum-based telecommunication projects as class activities (web quests, ask-an-expert, collaborative email projects).
- Select and use appropriate software and/or technologies to locate and acquire information from electronic resources (interactive books, educational software, and elementary multimedia encyclopedias).
- Explore grade-level appropriate search engines as tools to locate information electronically.
- Evaluate information found via telecommunications for content and usefulness.
- Apply, in a group situation, software programs to solving problems (e.g., word processors, graphing programs, other special purpose programs).

Fifth Grade

Course Description:

In Fifth grade, students will be introduced to more advanced hardware, software, and Internet terms. They will be taught to identify the components associated with the terms (both inside and outside a computer) by sight and function. They will gain proficiency in MS Office software such as MS Word and PowerPoint and will complete projects using each. They will also be introduced to basic Internet browser functions.

Benchmarks:

By the close of the Fifth Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a sound understanding of the nature and operation of technology systems.

- Diagnose and solve common technology problems.
- Manage and maintain technology tools (i.e., properly shut down system).

NTFS Standard 2: Social, ethical, and human issues

- Describe the use of acceptable use policy (AUP).
- Demonstrate an understanding of copyright by citing sources of copyrighted materials in papers, projects and multimedia presentations.

NTFS Standard 3: Technology productivity tools

- Use the editing functions of a word processor (i.e. spell check, grammar check, and thesaurus) and review page layout features such as paragraph, tabs, justification, and margins.
- Create/modify and use spreadsheets to perform simple calculations (+,-,*,/).
- Begin to use presentation software.

NTFS Standard 4: Technology communications tools

- Participate in a curriculum-based telecommunication project

NTFS Standard 5: Technology research tools

- Use telecommunications to locate information as a group/class project.
- Evaluate information found via telecommunications for appropriateness, content and usefulness.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Select the appropriate technology resource to solve problems in content area.

Assessments:

By the close of the Fifth Grade, the student will:

- Demonstrate an understanding of the roles of key internal and external computer components and use appropriate vocabulary to identify components.
- Understand the nature of basic common computer issues (system slowdowns, program lock-ups, no Internet connectivity, failure to print, etc) and be able to troubleshoot these issues.
- Demonstrate an ability to properly log onto and off of a Windows Domain network. Also demonstrate the appropriate time to use different system shut down procedures.
- Recognize correct use of copyrighted materials in electronic products.
- Describe the use of an acceptable use policy and recognize violations.
- Be able to begin to apply copyright standards by citing sources of copyrighted materials in papers, projects, and multimedia presentations.
- Demonstrate the appropriate use of word processor features such as spelling, grammar check and thesaurus as well as layout changes to enhance class assignments.
- Demonstrate the ability to perform simple calculations (i.e. +, -, *, and /) using a spreadsheet.
- Demonstrate the ability to create a basic individual electronic presentation (minimum of 5 slides) incorporating graphics, varying text layouts, and a consistent theme.

- Complete an individualized web-based project such as the tropical rain forest project.
- Use telecommunications (i.e. the Internet) to locate, organize, and apply information for a project.
- Be able to evaluate basic information located online for its appropriateness, usefulness, and content.
- Be able to select and apply the appropriate technology resource to solve problems within content areas. For example, if the student is completing a social studies project, she will know how to use a word processor to type her report, the Internet to research basic information, and a presentation software program to present the information.

Sixth Grade

Course Description:

In Sixth grade computers, students will develop a basic understanding of how the various components within a computer work. MS Office functionality will be reviewed, and students will complete projects using Word and PowerPoint to demonstrate proficiency. Students will be taught some advanced features of MS Office programs. Students will be introduced to Internet ethics, safety and protocol. Finally students will learn the basics of web design and create their own website.

Benchmarks:

By the close of the Sixth Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a sound understanding of the nature and operation of technology systems.
- Recognize the need for protection of software and hardware from malware and vandalism.
- Diagnose and solve common technology problems. Continue to manage and maintain technology tools (i.e., properly shut down system(s), load printer paper).

NTFS Standard 2: Social, ethical, and human issues

- Model ethical behavior relating to security, privacy, passwords and personal information.
- Demonstrate an understanding of copyright by citing sources of copyrighted materials in papers, projects and multimedia presentations.

NTFS Standard 3: Technology productivity tools

- Use advanced features and utilities of a word processor (i.e., bullets, tables, find and replace) and review spell check, grammar check, thesaurus.
- Learn to create basic data tables, charts, and graphs using spreadsheet software.
- Use presentation software demonstrating appropriate design layouts and formatting features (e.g., fonts, color, background designs) to effectively communicate.

NTFS Standard 4: Technology communications tools

- Create basic WebPages using a WYSIWYG editor and HTML to properly format the pages.

NTFS Standard 5: Technology research tools

- Learn to conduct effective keyword searches for topic and basic secondary research for a project..
- Evaluate information found via telecommunications for validity, appropriateness, content and usefulness.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Sixth Grade, the student will:

- Demonstrate an understanding of the roles of key internal and external computer components and use appropriate vocabulary to identify components.
- Understand the nature of common computer issues (system slowdowns, program lock-ups, no Internet connectivity, failure to print, etc) and be able to troubleshoot these issues.
- Demonstrate an ability to properly log onto and off of a Windows Domain network. Also demonstrate the appropriate time to use different system shut down procedures.
- Demonstrate a familiarity with the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.
- Demonstrate an understanding of copyright by independently citing sources of copyrighted materials in papers, projects, and multimedia presentations. The student recognizes incorrect applications (e.g., plagiarism, inaccurate citations) and their consequences.
- Demonstrate the appropriate use of advanced word processor features such as spelling, grammar check and thesaurus as well as layout changes to enhance class assignments.
- Demonstrate the ability to create a data table and a basic chart in a spreadsheet program.
- Create an electronic presentation incorporating appropriate design layout and formatting in a manner that effectively communicates the meaning of the presentation.
- Create basic WebPages using a WYSIWYG editor and HTML that are designed and laid out in a manner that effectively and appropriately communicates the student's message.
- Use the Internet to conduct topic and basic secondary research locating, organizing, and applying information for an applied project such as the student's science fair project.
- Be able to evaluate information located online for its appropriateness, usefulness, and content.
- Be able to evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.

Seventh Grade

Course Description:

This is part one of an introductory course to computers and technology. Students will gain an effective understanding about computer hardware and software basics, Windows navigation, effective computer security, word processing, spreadsheets, and presentation software. The effects of technology on the environment will also be covered.

Benchmarks:

By the close of the Seventh Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a sound understanding of the nature and operation of technology systems.
- Understand the most common types of malware and how to protect her personal and school computers from infection.
- Diagnose and solve common technology problems. Continue to manage and maintain technology tools (i.e., properly shut down system(s), load printer paper).
- Understand Microsoft Windows terminology and operating functions (i.e. keyboard shortcuts, use of taskbar, use of the start menu, etc).

NTFS Standard 2: Social, ethical, and human issues

- Learn about the basic environmental implications associated with modern technology.
- Model ethical behavior relating to security, privacy, passwords and personal information.
- Demonstrate an understanding of malware (viruses, worms, spyware, etc), how to protect her computer from being infected, and how to remove if infected.

NTFS Standard 3: Technology productivity tools

- Use basic, intermediate, and advanced functions of a word processing program.
- Use basic and intermediate functions of a spreadsheet program.
- Use basic, intermediate, and advanced functions of a presentation program.

NTFS Standard 4: Technology communications tools

- Use email to communicate with each other and the instructor for academic purposes.
- Use the Internet effectively for assignment details (i.e. Schoolnotes.com) as well as a resource for completing assignments.

NTFS Standard 5: Technology research tools

- Conduct effective keyword searches for topic and basic secondary research for a project..
- Evaluate information found via telecommunications for validity, appropriateness, content and usefulness.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Seventh Grade, the student will:

- Demonstrate an understanding of the roles of key internal and external computer components and use appropriate vocabulary to identify components.
- Understand the nature of common computer issues (system slowdowns, program lock-ups, no Internet connectivity, failure to print, etc) and be able to troubleshoot these issues.
- Demonstrate an ability to properly log onto and off of a Windows Domain network.

- Demonstrate an understanding of Windows terminology and common operating functions within Windows such as use of the desktop, use of the start menu, use of right clicks, use of display settings, and use of keyboard shortcuts).
- Know the differences and uses of various computer applications.
- Demonstrate a familiarity with the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.
- Demonstrate an understanding of copyright by independently citing sources of copyrighted materials in papers, projects, and multimedia presentations. The student recognizes incorrect applications (e.g., plagiarism, inaccurate citations) and their consequences.
- Demonstrate the appropriate use of advanced word processor features such as spelling, grammar check and thesaurus, manipulating images, tables as well as layout changes to enhance class assignments.
- Demonstrate the ability to create a data table and a basic chart in a spreadsheet program. Demonstrate the ability to format and sort data effectively in a spreadsheet.
- Create an electronic presentation incorporating appropriate design layout and formatting in a manner that effectively communicates the meaning of the presentation.
- Use Schoolnotes.com for assignment details and provided Internet links to further research information needed to complete assignments.
- Use the Internet to conduct topic and basic secondary research locating, organizing, and applying information for an applied project such as the student's science fair project.
- Be able to evaluate information located online for its appropriateness, usefulness, and content.
- Be able to evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.

Eighth Grade

Course Description:

This is part two of an introductory course to computers and technology. Students will demonstrate competency in using MS Word, Excel and PowerPoint. Students will gain an effective understanding about computer hardware and software basics, Windows navigation, effective computer security, Internet Basics, Internet Searching, and Web Design. Students will also be introduced to technologies outside of those directly tied to computers.

Benchmarks:

By the close of the Eighth Grade, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a sound understanding of the nature and operation of technology systems.
- Diagnose and solve common technology problems. Continue to manage and maintain technology tools (i.e., properly shut down system(s), load printer paper).
- Demonstrate a clear and firm understanding of Microsoft Windows terminology and operating functions (i.e. keyboard shortcuts, use of taskbar, use of the start menu, etc).
- Learn about and explore other forms of technology outside of personal computer-based technologies.

NTFS Standard 2: Social, ethical, and human issues

- Apply technology tools in a service-related fashion.
- Model ethical behavior relating to security, privacy, passwords and personal information.
- Demonstrate a clear and firm understanding of malware (viruses, worms, spyware, spam, phishing attacks), how to protect her computer from being infected, and how to remove if infected.

NTFS Standard 3: Technology productivity tools

- Demonstrate the ability to use basic, intermediate, and advanced functions of a word processing program.
- Demonstrate the ability to use basic and intermediate functions of a spreadsheet program.
- Demonstrate the ability to use basic, intermediate, and advanced functions of a presentation program.

NTFS Standard 4: Technology communications tools

- Use email to communicate with each other and the instructor for academic purposes.
- Use the Internet effectively for assignment details (i.e. Schoolnotes.com) as well as a resource for completing assignments.
- Create a basic WebSite using a WYSIWYG editor and HTML to properly format the pages.

NTFS Standard 5: Technology research tools

- Conduct effective keyword searches for topic and basic secondary research for a project.
- Evaluate information found via telecommunications for validity, appropriateness, content and usefulness.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Eighth Grade, the student will:

- Demonstrate a clear and firm understanding of the roles of key internal and external computer components and use appropriate vocabulary to identify components.
- Understand the nature of common computer issues (system slowdowns, program lock-ups, no Internet connectivity, failure to print, etc) and be able to troubleshoot these issues.
- Demonstrate a clear and firm understanding of Windows terminology and common operating functions within Windows such as use of the desktop, use of the start menu, use of right clicks, use of display settings, and use of keyboard shortcuts).
- Demonstrate a clear and firm understanding of the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.
- Demonstrate a clear and firm understanding of copyright by independently citing sources of copyrighted materials in papers, projects, and multimedia presentations. The student

recognizes incorrect applications (e.g., plagiarism, inaccurate citations) and their consequences.

- Demonstrate a clear and firm mastery of the appropriate use of advanced word processor features such as spelling, grammar check and thesaurus, manipulating images, tables as well as layout changes to enhance class assignments.
- Demonstrate a clear and firm mastery of creating a data table and a basic chart in a spreadsheet program and formatting and sorting data effectively in a spreadsheet.
- Demonstrate a clear and firm mastery of presentation software by creating an electronic presentation incorporating appropriate design layout and formatting in a manner that effectively communicates the meaning of the presentation.
- Demonstrate an understanding of WebPage development tools by creating a WebSite using WYSIWYG software and HTML.
- Use Schoolnotes.com for assignment details and the Internet (provided links as well as self-found Internet resources) to further research information needed to complete assignments.
- Use the Internet to conduct topic and basic secondary research locating, organizing, and applying information for an applied project such as the student's science fair project.
- Be able to independently evaluate information located online for its appropriateness, usefulness, and content.
- Be able to independently evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.

Elective Courses

Systems Design I

Course Description:

This course is the first part of the Systems Design courses. Students will develop an understanding of the components of a computer system (internal and external). This course will teach students to diagnose and troubleshoot common software and hardware-based computer issues. Students will also learn to build and configure a working Windows-based computer system from scratch.

Benchmarks:

By the close of the Systems Design I course, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a sound understanding of the internal and external components of computer systems.
- Diagnose and solve hardware and software based computer issues.

NTFS Standard 2: Social, ethical, and human issues

- Demonstrate a clear and firm understanding of malware (viruses, worms, spyware, spam, phishing attacks), how to protect her computer from being infected, and how to remove if infected.

NTFS Standard 4: Technology communications tools

- Use email to communicate with each other and the instructor for academic purposes.
- Use the Internet effectively for assignment details (i.e. Schoolnotes) as well as a resource for completing assignments.

NTFS Standard 5: Technology research tools

- Conduct effective Internet-based research for applied technology projects such as researching troubleshooting errors, new computer terminology, drivers and software, etc.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Systems Design I course, the student will:

- Demonstrate a clear and firm understanding of the roles internal and external computer components and use appropriate vocabulary to identify components.
- Demonstrate an understanding of typical hardware and software computer issues and errors and the ability to troubleshoot those issues.
- Demonstrate a clear and firm understanding of the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.
- Use Schoolnotes.com for assignment details and the Internet (provided links as well as self-found Internet resources) to further research information needed to complete assignments.
- Conduct effective Internet-based research for applied technology projects such as researching troubleshooting errors, new computer terminology, drivers and software, etc.
- Be able to independently evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.

Systems Design II

Course Description:

This course is the second part of the Systems Design courses. Students will continue to build and troubleshoot systems. This course will also cover networking in small environments using hubs, switches, routers and wireless equipment. Students will also be introduced to alternative operating systems such as Linux and Macintosh.

Benchmarks:

By the close of the Systems Design II course, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a clear and firm understanding of the internal and external components of computer systems.
- Diagnose and solve advanced hardware and software based computer issues.

NTFS Standard 2: Social, ethical, and human issues

- Demonstrate a clear and firm understanding of malware (viruses, worms, spyware, spam, phishing attacks), how to protect her computer from being infected, and how to remove if infected.

NTFS Standard 4: Technology communications tools

- Use email to communicate with each other and the instructor for academic purposes.
- Use the Internet effectively for assignment details (i.e. Schoolnotes) as well as a resource for completing assignments.
- Use the Internet (sites such as TechRepublic.com) and email to communicate with computer experts to assist with diagnosing and resolving computer issues.

NTFS Standard 5: Technology research tools

- Conduct effective Internet-based research for applied technology projects such as researching troubleshooting errors, new computer terminology, drivers and software, etc.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Systems Design II course, the student will:

- Demonstrate a clear and firm understanding of the roles internal and external computer components and use appropriate vocabulary to identify components.
- Demonstrate an understanding of networking equipment, protocols, and environments.
- Demonstrate a sound understanding of hardware, software, and networking computer issues and errors and the ability to troubleshoot those issues.
- Demonstrate a clear and firm understanding of the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.
- Use Schoolnotes.com for assignment details and the Internet (provided links as well as self-found Internet resources) to further research information needed to complete assignments.
- Use Internet and email resources to assist with diagnosing and troubleshooting computer issues.
- Conduct effective Internet-based research for applied technology projects such as researching troubleshooting errors, new computer terminology, drivers and software, etc.
- Be able to independently evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.

Web Design I

Course Description:

This course teaches students how to design WebPages using HTML and HTML editors. Students will design web pages using a basic text editor and a WYSIWYG web editor such as Microsoft FrontPage. They will learn to use tables and frames and insert multimedia such as images and sound into WebPages.

Benchmarks:

By the close of the Web Design I course, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate a basic understanding of how the Internet works.

NTFS Standard 2: Social, ethical, and human issues

- Demonstrate a clear and firm understanding of malware (viruses, worms, spyware, spam, phishing attacks), how to protect her computer from being infected, and how to remove if infected.

NTFS Standard 3: Technology productivity tools

- Demonstrate the understanding of basic HTML coding using a text editor.
- Demonstrate the ability to use basic and intermediate functions of an advanced WYSIWYG web editor such as Microsoft FrontPage.

NTFS Standard 4: Technology communications tools

- Use email to communicate with each other and the instructor for academic purposes.
- Use the Internet effectively for assignment details (i.e. Schoolnotes) as well as a resource for completing assignments.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Web Design I course, the student will:

- Demonstrate a basic understanding of how the Internet works.
- Demonstrate a clear and firm understanding of the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.
- Create basic WebPages using HTML coding in a text editor.
- Create more advanced Websites incorporating graphics, sound, backgrounds, color schemes, themes, etc. using an advanced WYSIWYG editor.
- Use Schoolnotes.com for assignment details and the Internet (provided links as well as self-found Internet resources) to further research information needed to complete assignments.
- Use the Internet to find legally permitted images and other media for incorporation into Websites.
- Be able to independently evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.

Web Design II

Course Description:

This course teaches students how to design webpages using HTML and other programs/languages. The focus of the class will be on designing and launching professional

webpages. Students will design and launch at least one professional webpage for a local business or organization. Students will also learn about web maintenance by helping to maintain Mount de Chantal's website.

Benchmarks:

By the close of the Web Design II course, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate an understanding of standard web design principles such as color schemes, formatting, use of ALT Tags, differing hyperlinks, navigation design, etc.
- Demonstrate the consistent use of themes and formatting across an entire web site.
- Demonstrate the incorporation of external documents and files such as documents and Acrobat documents into a web site.
- Learn to employ web design principles that are more accessible by people with disabilities.

NTFS Standard 2: Social, ethical, and human issues

- Demonstrate a clear and firm understanding of malware (viruses, worms, spyware, spam, phishing attacks), how to protect her computer from being infected, and how to remove if infected.

NTFS Standard 3: Technology productivity tools

- Demonstrate the understanding of basic HTML coding using a text editor.
- Demonstrate the ability to use basic, intermediate, and advanced functions of an advanced WYSIWYG web editor such as Microsoft FrontPage.
- Demonstrate the ability to use basic and intermediate web programming using formats other than HTML (i.e. Java, Flash, etc).

NTFS Standard 4: Technology communications tools

- Use email to communicate with each other and the instructor for academic purposes.
- Use the Internet effectively for assignment details (i.e. Schoolnotes) as well as a resource for completing assignments.

NTFS Standard 6: Technology problem-solving and decision-making tools

- Use technology resources for problem solving, self-directed learning, and extended learning activities.

Assessments:

By the close of the Web Design II course, the student will:

- Design multiple web pages and web sites that apply appropriate and consistent standard web formatting, color schemes, and other principles such as Alt Tags, various hyperlink frames, and differing navigation frames.
- Design a website that is accessible to people with disabilities.
- Develop a website for use by other students, staff and faculty at the school that demonstrates a clear and firm understanding of the basic forms of malware (i.e. viruses, worms, Internet Attacks, spyware) as well as basic precautions to avoid infection.

- Create advanced and professional Websites incorporating graphics, sound, backgrounds, color schemes, themes, and other programming languages (i.e. Java, Flash, etc), etc. using an advanced WYSIWYG editor.
- Use Schoolnotes.com for assignment details and the Internet (provided links as well as self-found Internet resources) to further research information needed to complete assignments.
- Use the Internet to find legally permitted images and other media for incorporation into Websites.
- Be able to independently evaluate various familiar technology tools, determine which are the most appropriate to employ for a given assignment, and, in a self-directed fashion, use those tools to complete an extended learning activity.
- Maintain a section of the Mount de Chantal website including making regular updates and changes.
- Design and launch a new section for Mount de Chantal's website.

Keyboarding

Course Description:

The goal of the Keyboarding course is to enhance students' touch-typing skills using a QWERTY keyboard layout. The software employed teaches proper posture as well how to employ touch-typing for each of the keys. Students will learn and practice keyboarding skills through a variety of software-guided lessons and games. Keyboarding is a software-driven class; a faculty member serves as a facilitator and handles grading and technical issues with the software.

Benchmarks:

By the close of the Keyboarding course, students will:

NTFS Standard 1: Basic operations and concepts

- Demonstrate mastery of the QWERTY keyboard layout.

NTFS Standard 3: Technology productivity tools

- Demonstrate mastery of touch typing skills.

Assessments:

By the close of the Keyboarding course, the student will:

- Demonstrate at least a 50% increase in typing speed and reduction in keyboarding errors to no more than 5%.

TECHNOLOGY ENRICHMENTS

4th Grade

1. Learning and using enhanced features of the software such as animations in MS PowerPoint and hyperlinks in MS Word.
2. Using age-appropriate digital game based learning (DGBL) tools such as Zoo Vet to enhance computer skills when other technology-based assignments have been completed.

3. Assisting the computer teacher with other technology projects (i.e. basic computer troubleshooting in the technology lab, laying out computer assignments for other classes, assisting classmates with current project) when finished with assignment.

6th Grade

1. Learning and using enhanced features of the software such as incorporating multi-media and varied backgrounds, shading and borders in MS Office applications.
2. Assisting the computer teacher with other technology projects (i.e. basic computer troubleshooting in the technology lab, laying out computer assignments for other classes, assisting classmates with current project) when finished with assignment.

8th Grade

1. Learning and using enhanced features of the software such as incorporating multi-media and varied backgrounds, shading and borders in MS Office applications, using equations in MS Excel, and beginning web design techniques.
2. Assisting the computer teacher with other technology projects (i.e. basic computer troubleshooting in the technology lab, laying out computer assignments for other classes, assisting classmates with current project) when finished with assignment.

Systems Design I and II

1. Enhanced projects such as diagnosing and troubleshooting particularly difficult computers/technology.
2. Maintaining a particularly challenging area of computers (such as the elementary computer lab).
3. Working with the Technology Director on server-based or network-based computer issues.

Web Design I and II

1. Enhanced projects involving maintaining and updating section of MdeC's website.
2. Learning and using enhanced programming languages and features such as java script, flash, active scripts.