

TRUMBULL PUBLIC SCHOOLS

Trumbull, Connecticut

Computer Technology

Elective

Business Education Department

2014

(Last Revised 2002)

Curriculum Writing Team

Kristen O'Connell-Rubin
Debra Owen

Teacher
Department Chairperson

Linda S. Paslov, Ed.D., Director of Curriculum, Instruction & Assessments

Computer Technology

Elective

Table of Contents

Core Values and Beliefs	2
Introduction.....	2
Philosophy	2
Course Description	2
Goals	3
Unit 1: Microsoft Office Word	4
Unit 2: Microsoft Office Excel	7
Unit 3: Microsoft Office Access	11
Unit 4: Multimedia Presentation Applications.....	14
Methods of Assessment	18
Course Credit.	19
Prerequisites.....	19
Text(s)	19
Supplementary Materials/Resources/Technology	19
Student Responsibilities	20
School-Wide Rubrics	21
Appendix.....	24
Current References	43

The Trumbull Board of Education, as a matter of policy, prohibits discrimination on the grounds of age, creed, religion, sex, race, color, handicap, political affiliation, marital status, sexual orientation, or national origin.

CORE VALUES AND BELIEFS

The Trumbull High School Community, which engages in an environment conducive to learning, believes that all students will read and write effectively, therefore communicating in an articulate and coherent manner. All students will participate in activities that address problem-solving through critical thinking. Students will use technology as a tool in decision making. We believe that by fostering self-confidence, self-directed and student-centered activities, we will encourage independent thinking and learning. We believe ethical conduct to be paramount in sustaining our welcoming school climate.

INTRODUCTION

Computer Technology is a half year business elective course offered to students in grades 9 through 12 at Trumbull High School interested in developing, building, and applying knowledge of the programs in the Microsoft Office Suite and other related application. The purpose of this course is to introduce students to Microsoft Office Word, Excel, Access, PowerPoint, and other innovative presentation programs. Developing the skills to use a variety of computer applications properly will allow students to complete tasks faster, more accurately, and in some cases, in ways that previously would not have been possible.

PHILOSOPHY

Business Education is an integral part of the total academic structure and provides a significant contribution to the education of all students in a business-oriented society. Specifically, Computer Technology is planned and sequenced to prepare students for independent use of proper computer application skills for coursework, professional purposes, and personal use. Students will learn not only to perform skills, but to retain those skills and know how to apply them to different settings in the future. Whether students desire to learn more advanced computer skills for their education, employment, or leisure, Computer Technology will provide students with technology skills necessary for the 21st century.

COURSE DESCRIPTION

Students taking the Computer Technology course will learn the basic tools of the Microsoft Office Suite and other presentation applications. This will include Microsoft Word, Excel, Access, PowerPoint, Prezi, and Photo Story. The course is a hands-on class with a variety of creative projects. The skills learned can easily be applied to other courses. This course provides instruction in the skills needed to pass the computer proficiency requirement at most colleges.

Computer Technology is a half-year, .5 credit course available to all grade levels. There are no prerequisites for this course.

GOALS

Upon completion of this course, students will:

- Discover the underlying functionality of Microsoft Office and other computer programs so they can become more productive.
- Develop technology-based problem-solving skills through exposure to practical examples of the computer as a useful tool.
- Demonstrate an understanding of the proper procedures to create documents, worksheets, databases, and presentations suitable for coursework, professional purposes, and personal use.
- Create and evaluate a variety of projects based on an exercise-oriented approach that allows learning by doing.
- Utilize the basic project planning guidelines of determining the purpose, analyzing the audience, gathering content, and determining the content to present to the audience.

Unit 1

Microsoft Office Word

Performance Standards

At the completion of this unit

- 04.2.1.0.5 Students will discuss common uses of technology in daily life and the advantages and disadvantages those uses provide
- 04.2.1.0.3 Students will communicate about technology using developmentally appropriate and accurate terminology
- 04.2.1.0.2 Students will use a variety of media and technology resources for directed and independent learning activities
- 04.2.1.5.4 Students will independently operate school computers and demonstrate ability to use the system's software and special features
- 04.2.3.0.2 Students will create developmentally appropriate multimedia products with support from teachers, family members, or student partners
- 04.2.3.0.4 Students will use appropriate software (writing tools, hypermedia, drawing tools, etc.) to organize and present ideas

Essential Question: **How does one utilize the skills necessary to incorporate the Microsoft Word application software in everyday life?**

Focus Questions

Following completion of this unit, students will be able to answer the following questions:

- Why is the proper use of Microsoft Word helpful in various avenues of life?
- How does one create a well-designed and effective flyer using proper formatting techniques?
- What are the essential pieces of a research paper and how does one utilize newly developed skills to effectively and efficiently format an MLA documentation style research paper?
- How does a resume and a cover letter reflect an individual?
- How can wizard tools assist in creating aesthetically pleasing documents?
- How can one manipulate a predesigned template in order to amend a document for personal or business use?

Scope and Sequence

- I. Creating and Editing a Word Document
 - A. Enter text, check spelling as you type, and save a document
 - B. Format text, paragraphs, and document elements
 - C. Undo and redo commands or actions
 - D. Correct errors in a document
- II. Creating a Research Paper
 - A. Change line and paragraph spacing in a document
 - B. Use a header to number pages of a document
 - C. Modify paragraph indentation and styles
 - D. Insert and edit citations and their sources
 - E. Create a bibliographical list of sources
- III. Creating a Cover Letter and a Resume
 - A. Identify the components of a business letter

- B. Format characters, paragraphs, and graphics
 - C. Set and use tab stops
 - D. Insert a Word table, enter data in the table, and format the table
 - E. Copy and paste using the Office Clipboard
- IV. Creating Documents Using Templates
- A. Create and compose a business letter
 - B. Use Office Word Wizards to create and fill in business document templates
 - C. Use Office Word Wizards to create and fill in personal document templates

Instructional/ Teaching Strategies

It is assumed that students have had exposure to the Microsoft Office Word software. However, the amount of exposure and level of correct usage differs with each student. At the onset of the unit, the teacher facilitates class discussion regarding current use of the program; additionally, students express skills necessary for efficiency in school work and the workplace. It is explained that the students will gain knowledge of various methods to use the Word program correctly in order to enhance their productivity. Students are given a pre-assessment activity in Microsoft Word in order to determine their background level in the software.

Students are provided with guided instruction on how to properly format documents, utilize the new research paper functions on Word, and create a variety of products using the Word wizard feature. Students are given activities and projects to demonstrate mastery of the material. Advanced students are given the option to work at their own pace and complete enrichment exercises.

During closure of the unit, students are asked to make connections from skills learned in class to real-world scenarios in order to determine the ways in which this new technology skill will aide them in the future.

Technology Competency Standards

Competency Standard 1: Basic Operations and Concepts

- Make informed choices among technology systems, resources and services
- Produce a variety of products using the advanced features of personal productivity software

Competency Standard 2: Social, Ethical and Human Issues

- Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs
- Make informed choices among technology systems, resources, and services
- Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole
- Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information
- Observe all ethical and legal restraints in copying or using material from any print, non-print or electronic resources
- Observe local, state and national laws and policies and procedures regarding the use of computers, other technologies and networks

Competency Standard 3: Technology Productivity Tools

- Use technology tools and resources for managing and communicating personal/professional information

- Investigate and apply expert systems, intelligent agents, and simulations in real-world situations
- Create written, oral, numeric and visual communications using appropriate applications to construct, organize analyze and interpret ideas and data, and present conclusion

Competency Standard 4: Technology Communications

- Use technology tools and resources for managing and communicating personal/professional information
- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
- Select and apply technology tools for research, information analysis, problem-solving and decision-making in content learning
- Collaborate with peers, experts and others to compile, synthesize, produce and disseminate information, models and other creative works

Competency Standard 5: Technology Research Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
- Independently select and use an appropriate search engine or directory related to a specific task

Competency Standard 6: Technology Problem-Solving and Decision-Making Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity
- Investigate and apply expert systems, intelligent agents and simulations in real-world situations
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works

Assured Learner Activities

Flyer/Announcement Project: Using proper application of Microsoft Word techniques, students create a one-page flyer demonstrating mastery of newly learned skills. Students turn in a printed version of the document that is graded using a teacher-made rubric.

MLA Research Paper Project: Students practice setting up a research paper using the MLA style with newly acquired skills via Word's research paper options that are available. They then apply these skills independently to a new research paper to exhibit their expertise. This project is graded using a teacher-made rubric.

Resume, Cover Letter, and Wizard Project: Students use newfound knowledge of resumes and cover letters to create these correctly formatted documents independently. They also use several Office Word Wizard templates available to customize them for both personal and business use. The project is graded using a teacher-made rubric.

All projects and rubrics can be located in the Appendix.

Time Allotment: 5 weeks

Unit 2

Microsoft Office Excel

Performance Standards

At the completion of this unit

- 04.2.1.0.5 Students will discuss common uses of technology in daily life and the advantages and disadvantages those uses provide
- 04.2.1.5.4 Students will independently operate school computers and demonstrate ability to use the system's software and special features
- 04.2.1.5.5 Students will demonstrate the ability to independently use personal productivity software to create products in a wide range of formats (newsletters, budgets, brochures, imported graphics, web pages, etc.)
- 04.2.1.5.7 Students will demonstrate the ability to use basic features (entering information/data, editing, calculating, manipulating information, saving files) of personal productivity software (word processing, desktop publishing, spreadsheets, databases, etc.)
- 04.2.2.0.1 Students will practice responsible use of technology systems and software
- 04.2.5.0.2 Students will use Internet resources and other electronic information resources with assistance
- 04.2.5.0.5 Students will use simple menus to locate information from electronic media
- 04.2.5.0.6 Students will select and use appropriate tools and technology resources, with assistance, to accomplish a variety of tasks and solve problems
- 04.2.5.5.10 Students will demonstrate the ability to identify and use a variety of features to locate information using an Internet search engine or directory
- 04.2.5.5.12 Students will use a variety of technology tools to organize and manipulate data to solve problems
- 04.2.5.9.7 Students will demonstrate the ability to solve problems by collecting, analyzing and interpreting data through the use of data management software (databases, spreadsheets, etc.)
- 04.2.5.9.9 Students will use technology tools to generate findings and organize results for presentation

Essential Question: **How can one apply various functions of the Microsoft Office Excel application to coursework and other real life scenarios?**

Focus Questions

Following completion of this unit, students will be able to answer the following questions:

- How can one use Microsoft Office Excel to organize and format data into a well laid out spreadsheet allowing a target audience to comprehend and interpret?
- How does one create an appropriate graph to showcase both given and researched data in order to convey specific information?
- How do various functions in Excel assist in completing calculations with accuracy and ease?
- How does one develop professional looking reports with a variety of information?
- How does one complete meaningful real-world business tasks by analyzing and evaluating a completed Excel spreadsheet?
- How does one access real-time data from Web sites and incorporate it in a well-developed spreadsheet?

Scope and Sequence

- I. Creating a Worksheet and an Embedded Chart
 - A. Enter text and numbers into an Excel worksheet
 - B. Use the sum button to sum a range of cells
 - C. Copy the contents of a cell to a range of cells using the fill handle
 - D. Format cells in a worksheet
 - E. Create a 3-D Clustered Column Chart
 - F. Use the Auto Calculate area to determine statistics
- II. Formulas, Functions, Formatting, and Web Queries
 - A. Enter formulas using the keyboard and Pointe mode
 - B. Apply the AVERAGE, MAX, and MIN functions
 - C. Apply a theme to a workbook
 - D. Add conditional formatting to cells
 - E. Change column width and row height
 - F. Set margins, headers, and footers in Page Layout View
 - G. Use a Web query to get real-time data from a Web site
 - H. Rename sheets in a workbook

Instructional/ Teaching Strategies

Being that the ability to efficiently navigate and utilize Microsoft Excel software is arguably one of the most necessary computer skills for secondary and post-secondary coursework as well as the workplace, emphasis is placed on this level of importance in the initial phases of the unit in both a whole class and small group settings. With a class consisting of varying levels of background knowledge on the topic, instruction begins at the very basics so that all students can review proper beginning techniques and/or master new skills for use at a more advanced level.

Guided instruction is at the heart of any entry-level technology skill. As students are taken through detailed instruction surrounding the set-up, formatting, and manipulation of a variety of data in Excel, they are asked to verbalize what it is that they are creating and how that information could be used by various audiences. Throughout the unit, it is essential that students learn how to research original data, determine a proper way to format and make calculations in the spreadsheet, and create an appropriate graph to depict the data; through it all, they must be detailed yet concise enough to be able to communicate the data as a whole to an outside party. This skill will prove to be very important in future classwork and in the workplace.

Conclusion of the unit includes a review of new skills acquired along with discussions surrounding their importance. The students are able to verbalize numerous scenarios in which Excel could assist them and how it would be able to help them complete a task more efficiently and effectively.

Technology Competency Standards

Competency Standard 1: Basic Operations and Concepts

- Make informed choices among technology systems, resources and services
- Produce a variety of products using the advanced features of personal productivity software

Competency Standard 2: Social, Ethical and Human Issues

- Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs
- Make informed choices among technology systems, resources, and services
- Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole
- Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information
- Observe all ethical and legal restraints in copying or using material from any print, non-print or electronic resources
- Observe local, state and national laws and policies and procedures regarding the use of computers, other technologies and networks

Competency Standard 3: Technology Productivity Tools

- Use technology tools and resources for managing and communicating personal/professional information
- Investigate and apply expert systems, intelligent agents, and simulations in real-world situations
- Create written, oral, numeric and visual communications using appropriate applications to construct, organize analyze and interpret ideas and data, and present conclusion

Competency Standard 4: Technology Communications

- Use technology tools and resources for managing and communicating personal/professional information
- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
- Select and apply technology tools for research, information analysis, problem-solving and decision-making in content learning
- Collaborate with peers, experts and others to compile, synthesize, produce and disseminate information, models and other creative works

Competency Standard 5: Technology Research Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works
- Demonstrate the ability to solve problems by collecting, analyzing and interpreting data through the use of data management software
- Independently select and use an appropriate search engine or directory related to a specific task
- Use technology tools to generate findings and organize results for presentation

Competency Standard 6: Technology Problem-Solving and Decision-Making Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity

- Investigate and apply expert systems, intelligent agents and simulations in real-world situations
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works

Assured Learner Activities

Excel Project 1: Students will perform a variety of tasks centered on the graphing skill and basic calculations in Microsoft Excel. They will use both given and individually researched information to chart and graph. The goal is for students to apply learned graphing skills in an attractive embedded chart complete with appropriate labels. The project will be graded on the computer by the teacher using a rubric to ensure accurate equations were used in calculations.

Excel Project 2/3: Students will utilize a variety of calculation functions available in order to manipulate and present data using Excel. They will learn about the stock market in order to "invest" money, track stocks, record their findings, and convey their gains or losses pictorially in a variety of graphs. Students will also learn and apply the concept of 'absolute value' in Excel to create a complex spreadsheet in an efficient manner. The project will be graded on the computer by the teacher using a rubric to ensure accurate equations were used in calculations.

All projects and rubrics can be located in the Appendix.

Time Allotment: 7 weeks

Unit 3

Microsoft Office Access

Performance Standards

At the completion of this unit

- 04.2.1.5.7 Students will demonstrate the ability to use basic features (entering information/data, editing, calculating, manipulating information, saving files) of personal productivity software (word processing, desktop publishing, spreadsheets, databases, etc.)
- 04.2.3.5.6 Students will create databases, spreadsheets and a variety of graphic presentations to communicate numeric and visual information using applications with varied and more sophisticated features
- 04.2.3.9.3 Students will create written, oral, numeric and visual communications using appropriate applications (spreadsheet, database, hypermedia, etc.) to construct, organize, and analyze and interpret ideas and data, and present conclusion
- 04.2.5.0.3 Students will describe ways technology can be used to organize and reorganize information
- 04.2.5.0.4 Students will perform simple key word searches
- 04.2.5.5.12 Students will use a variety of technology tools to organize and manipulate data to solve problems

Essential Question: **How can Microsoft Office Access assist in managing a large amount of information through a database?**

Focus Questions

Following completion of this unit, students will be able to answer the following questions:

- What is a database and what type of information can be stored in one?
- Why is it important to use Microsoft Access to create and keep a database to store, organize, and retrieve large amounts of data?
- How does one create an Access database along with relevant subsets in which to hold information with various formats?
- How does one add, change, and delete data in the database using various mechanisms?
- How does one produce attractive and useful forms and reports for viewing, updating, and presenting data?
- What are queries and how does one create effective query designs to ask complex questions concerning data and then receive instant answers?

Scope and Sequence

I. Creating and Using a Database

- A. Design and create a database to satisfy a collection of requirements
- B. Create a table and add records
- C. Print the contents of a table
- D. Create and print custom reports

II. Querying a Database

- A. Create queries using the Simple Query Wizard
- B. Create queries using the design grid
- C. Save a query and use the saved query

Instructional/ Teaching Strategies

It is assumed that students have little or no experience with the Microsoft Office Access software. At the onset of the unit, whole class and small group discussions ensue regarding the suitability of the program in various real world scenarios. Students conclude that most currently do not have a need for the software in their everyday lives but that it is used in the workplace for organization of data and is a good background technology skill to have.

Students are taken through step-by-step instruction of how to properly set up a database and input a variety of queries. Independent practice of the set-up and application ensues with guidance along the way. When the skills are mastered, students are asked to create a database on their own given basic information. They are also given the opportunity to collect their own data and create an original database with the ability to use it efficiently with student-created queries.

Closure of the unit includes feedback regarding efficiency in the workplace with the proper use of the software. Pros and cons of the program are discussed. Students are able to fully comprehend the benefit of their ability to operate the program.

Technology Competency Standards

Competency Standard 1: Basic Operations and Concepts

- Make informed choices among technology systems, resources and services
- Produce a variety of products using the advanced features of personal productivity software

Competency Standard 2: Social, Ethical and Human Issues

- Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs
- Make informed choices among technology systems, resources, and services
- Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole
- Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information
- Observe local, state and national laws and policies and procedures regarding the use of computers, other technologies and networks

Competency Standard 3: Technology Productivity Tools

- Use technology tools and resources for managing and communicating personal/professional information
- Investigate and apply expert systems, intelligent agents, and simulations in real-world situations
- Create written, oral, numeric and visual communications using appropriate applications to construct, organize analyze and interpret ideas and data, and present conclusion

Competency Standard 4: Technology Communications

- Use technology tools and resources for managing and communicating personal/professional information
- Select and apply technology tools for research, information analysis, problem-solving and decision-making in content learning
- Collaborate with peers, experts and others to compile, synthesize, produce and disseminate information, models and other creative works

Competency Standard 5: Technology Research Tools

- Collaborate with peers, experts and others to compile, synthesize, produce and disseminate information, models and other creative works

- Demonstrate the ability to solve problems by collecting, analyzing and interpreting data through the use of data management software
- Independently select and use an appropriate search engine or directory related to a specific task

Competency Standard 6: Technology Problem-Solving and Decision-Making Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity
- Investigate and apply expert systems, intelligent agents and simulations in real-world situations
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works

Assured Learner Activities

Access Project 1: Students create a database and tables within the database in which to hold information. They input information into the proper section of a database in order to organize it for future access and interpretation. After, students produce reports with specific information in order to communicate data that is held in the database. This project is graded using a teacher-made rubric.

Access Project 2: Querying a Database: Students will use the database developed in Project 1 to create and use various types of queries in order to retrieve specific information found in the tables. The project will be graded on the computer by the teacher using a rubric to ensure accurate set up of the various queries.

Access Car Project: This project is used when time permits and/or advanced student(s) have the time and ability to complete it. Students collect and share data and then create a database based on the information retrieved. They then design and use queries within the database to find specific information. The project is graded using a teacher-made rubric.

All projects and rubrics can be located in the Appendix.

Time Allotment: 2 weeks

Unit 4

Multimedia Presentation Applications

Performance Standards

At the completion of this unit

- 04.2.3.0.2 Students will create developmentally appropriate multimedia products with support from teachers, family members, or student partners
- 04.2.3.0.1 Students will use a variety of media and technology resources for directed and independent learning activities
- 04.2.3.0.4 Students will use appropriate software (writing tools, hypermedia, drawing tools, etc.) to organize and present ideas
- 04.2.3.5.4 Students will use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom
- 04.2.6.9.3 Students will collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works
- 04.2.5.9.5 Students will collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works

Essential Question: **How can various multimedia presentation applications act as visual aides to enhance communication to particular audiences?**

Focus Questions

Following completion of this unit, students will be able to answer the following questions:

- How can a multimedia presentation application strengthen (or weaken) communication to its viewers?
- How does one determine an appropriate multimedia application to include in a presentation given the audience and topic at hand?
- How does one create, modify, and use a Microsoft Photo Story presentation to outline important events and storylines?
- How does one develop and show an effective Prezi to convey information in an organized and meaningful way to an audience?
- How does one generate a themed Microsoft PowerPoint slideshow with appropriate additions and effects?

Scope and Sequence

I. Microsoft Photo Story

- A. Collect and insert images
- B. Create animations within images
- C. Add transitions in between images
- D. Insert music into presentation
- E. Convert to .wmv file for viewing

II. Prezi

- A. Create frames to group content
- B. Add/manipulate text and images
- C. Insert video and/or multimedia
- D. Create a logical path
- E. Show/preview presentation

III. Microsoft PowerPoint

- A. Apply theme/background to slideshow
- B. Create a variety of slide layouts
- C. Insert animations and transitions in slideshow
- D. Insert music and/or sound to a slideshow

Instructional/ Teaching Strategies

Being that oral presentations are/will be a part of students' curriculum and potentially part of their future careers, it is essential to equip them with a variety of technology skills that they can utilize correctly. Initiation of the unit includes a sampling of stellar presentation aides including Photo Story, Prezi, and PowerPoint. Students can begin to decipher appropriate uses for each one. Class discussion helps to differentiate the three.

Students are directed to create sample presentations with the instructor to familiarize them with the technology. Various skills are demonstrated and then the students are given the opportunity to practice those skills individually. As with any new technology skill, practicing and trying new applications leads to mastery. Students are then presented with projects that allow them to showcase their skills and creativity. They are given the option to choose a subject that interests them within the confines of the assignment(s). Depending on skill level, they will be able to then modify various applications such as animations, added music files, etc. Minimum skills are required to be demonstrated in the project but students are encouraged to reach their maximum potential with the software.

Depending on time constraints, students will present their projects to the class and receive peer feedback based on the requirements of the activity. It is important for students to experience various presentation products, assess them, and receive evaluations from others in order to remain active in the learning cycle. These projects are the final preparation for the final exam project that they will complete at the culmination of the course.

Technology Competency Standards

Competency Standard 1: Basic Operations and Concepts

- Make informed choices among technology systems, resources and services
- Produce a variety of products using the advanced features of personal productivity software

Competency Standard 2: Social, Ethical and Human Issues

- Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs
- Make informed choices among technology systems, resources, and services
- Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole
- Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information
- Observe all ethical and legal restraints in copying or using material from any print, non-print or electronic resources
- Observe local, state and national laws and policies and procedures regarding the use of computers, other technologies and networks

Competency Standard 3: Technology Productivity Tools

- Use technology tools and resources for managing and communicating personal/professional information

- Investigate and apply expert systems, intelligent agents, and simulations in real-world situations
- Create written, oral, numeric and visual communications using appropriate applications to construct, organize analyze and interpret ideas and data, and present conclusion

Competency Standard 4: Technology Communications

- Use technology tools and resources for managing and communicating personal/professional information
- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
- Select and apply technology tools for research, information analysis, problem-solving and decision-making in content learning
- Collaborate with peers, experts and others to compile, synthesize, produce and disseminate information, models and other creative works

Competency Standard 5: Technology Research Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
- Select and apply technology tools for research, information analysis, problem-solving, and decision-making in content learning
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works
- Demonstrate the ability to solve problems by collecting, analyzing and interpreting data through the use of data management software
- Independently select and use an appropriate search engine or directory related to a specific task
- Use technology tools to generate findings and organize results for presentation

Competency Standard 6: Technology Problem-Solving and Decision-Making Tools

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity
- Investigate and apply expert systems, intelligent agents and simulations in real-world situations
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce and disseminate information, models and other creative works

Assured Learner Activities

Photo Story Project: Depending on the semester of the school year, students collect, organize, and insert images into a Photo Story presentation to represent Veterans Day or Memorial Day. After adding various effects such as music, transitions, animations, and timing of pictures, students convert their Photo Story project file into a Windows Video Media file for easy viewing. Final products are then shared with peers for feedback. The project is graded using a teacher-made rubric.

Prezi Project: Students create a Prezi file, set up a logical and sequential show, and organize information in it that they will be sharing about a television show. In addition to information, students incorporate theme music, multimedia files, and a relevant path for the presentation to follow. Final Prezis are then shared with peers for feedback. The project is graded using a teacher-made rubric.

PowerPoint Project: Students use the PowerPoint slideshow application to introduce a musician or band to their audience. They will include factual information, music files that are controlled by

animation, transitions, and other higher level PowerPoint skills. As practice for their final project, they will present their slideshow to their peers and receive feedback. The project is graded using a teacher-made rubric.

All projects and rubrics can be located in the Appendix.

Time Allotment: 4 weeks

METHODS OF ASSESSMENT

As Computer Technology is a course designed to allow students to apply learned technology skills to real-life scenarios, the assessments are mainly project-based in nature. Generally, assessments that are implemented are developed to show a student's progress in the following areas:

- Understanding the concepts and overarching ideas revolving around each unit
- Applying learned technology skills in various formats
- Creating new products relating to each unit to demonstrate mastery of techniques and assess ability as independent thinkers
- Evaluating the effectiveness of the technology used as well as products from a variety of sources

Evaluation will include an assessment of the following student activities:

Student Created Projects

- proper application of technology skills in new settings
- ability to utilize a variety of resources in creating products
- creative and original products
- ability to conduct effective research to include in projects
- ability to format projects so they are aesthetically pleasing
- ability to explain reasoning behind various technology decisions
- ability to make connections between project applications and real-life applications

Student Class Contribution/Effort

- ability and participation/cooperation with peers in a small cooperative group setting
- ability in oral response during whole class discussion
- diligence in reviewing work completed and altering errors before turning in to be graded

Student Self/Peer Evaluations

- awareness of various levels of expertise in programs
- critiquing own work before and after viewing those of peers
- ability to provide accurate and effective feedback to peers

Final Project

The final project of the course incorporates a majority of the material that was covered during the semester. Students are given the option to use a presentation application that best fits the factual topic of the student's choice. The final project will assess students on the following:

- the ability to manipulate data and utilize various skills developed to convey information in a coherent manner
- the ability to utilize a multimedia presentation application to present a factual topic to an audience with a well-organized and sequential approach

Project and Rubric can be located in the Appendix.

Time Allotment: 2 weeks

COURSE CREDIT

One-half credit in Business
One class period daily for one semester
Unleveled Elective

PREREQUISITES

None

TEXT

Microsoft Office 2007: Introductory Concepts and Techniques, Windows Vista Edition
Shelly Cashman Series
2008 Course Technology, Cengage Learning

SUPPLEMENTARY MATERIALS/ RESOURCES/ TECHNOLOGY

Daily computer lab usage with access to Internet
IT personnel to assist in computer lab when necessary
Smart Board
Microsoft Office Suite Software
Microsoft Photo Story Software

Student Responsibilities For Computer Technology

- ATTENDANCE:** You are expected to come to class ready to work. Please keep in mind that I will report cuts to your parent(s) and house principal.
- TARDIES:** You are expected to arrive to class **on time** each day. Unexcused tardiness will negatively affect your marking period grade.
- PARTICIPATION:** Your daily participation is extremely important. You are expected to ask and answer questions as well as assist your classmates whenever possible.
- EFFORT:** Since there is no homework in this class you are expected to use every available minute in class to complete your assignments. Each project should be completed to the best of your ability and should reflect "pride" in your work. Daily effort (which includes attendance, effort, and participation) will make up 20% of your marking period grade.
- COMPUTER USE:** All students **MUST** abide by the computer room rules! Each student must have submitted a signed district Student Internet Policy form allowing internet use.
- PROJECTS/TESTS:** The graded projects and tests will make up 80% of your marking period grade. Each grade will be based on your ability to follow directions and apply the concepts we have discussed and practiced in class to either your project or test questions. Points will be deducted for late assignments. Grading rubrics will be provided for each project.
- Projects will include assignments from each of the following: WORD, ACCESS, EXCEL, POWERPOINT, and other presentation applications.

Keep in mind that I am available for extra help as long as you give me 24-hour notice. As long as you work hard, I will do everything in my power to help you succeed.
