WARREN COUNTY SCHOOL DISTRICT

Planned Instruction

Course Title: COMPUTER TECHNOLOGY

Course Number: 1253

Suggested Educational Level(s):   9th Grade

Suggested Periods Per Week: 5   **Length of Period**: 40 minutes

Suggested Length Of Course: 90 days

Units Of Credit (If Appropriate):   1/2

Date Written: Fall 2005   **Date Approved**:

Date Reviewed: August 1, 2005   **Implementation Year**:   2006 - 2007

Teacher Certification Required:

Standards Addressed (code):

Science and Technology 3.6.10B, 3.7.10C, 3.7.10D, 3.7.10E 3.7.12C, 3.7.12D, 3.7.12E

Mathematics 2.1.1A, 2.2.11A, 2.2.11E, 2.2.11F, 2.5.11A, 2.5.11B, 2.5.11C, 2.5.11D,

2.8.11B

Relationship to Other Planned Instruction:

Prerequisites:

Special Requirements: There should be only one student per computer during lab sessions.

Writing Team Members:		Revision Team Members
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Standards addressed (code and description):

3.6 Technology Education

3.6.10 B Apply and analyze knowledge of information technologies to encoding, transmitting, receiving, storing, retrieving and decoding.

3.7   Technological Devices

3.7.10 C   Apply basic computer operations and concepts

3.7.12 C   Evaluate computer operations and concepts as to their effectiveness to solve specific problems.

3.7.10 D   Utilize computer software to solve specific problems.

3.7.12 D Evaluate the effectiveness of computer software to solve specific problems.

3.7.10 E Apply the basic computer communications systems.

3.7.12 E Assess the effectiveness of computer communication systems.

2.1.11A Use operations

2.2.11A Develop and use computation concepts, operations and procedures with real numbers in problem solving situations

2.2.11E Recognize that the degree of precision needed in calculating a number depends on how the results will be used and the instrument used to generate the measure

2.2.11F Demonstrate skills for using computer spreadsheets and scientific and graphing calculators

2.5.11A Select and use appropriate mathematical concepts and techniques from different areas of mathematics and apply them to solving non-routine and multi-step problems

2.5.11.B Use symbols, mathematical terminology, standard notation, mathematical rules, graphing and other types of mathematical representations to communicate observations, predictions, ideas and results.

2.5.11.C Present mathematical procedures and results clearly, concisely, systematically, succinctly and correctly.

2.5.11.D Conclude a solution process with a summary of results and evaluate the degree to which the results obtained represent an acceptable response to the initial problem and why the reasoning is valid.

2.8.11B Give examples of patterns that occur in data from other disciplines.

COURSE DESCRIPTION: (Brief – suitable for course descriptions issued to students.)

This course is required of all ninth grade students in the Warren County School district.

The purpose of this course is to help students acquire the skills necessary to become proficient with the computer. This course will include topics in word processing, databases, spreadsheets, desktop publishing, presentations, and web pages.

Outline of Content Sequence and Recommended Time (weeks or days):

5 Days	I. Word Processing
15 Days	II. Relational Database Operations
30 Days	III. Applications of Spreadsheets
15 Days	IV. Using Desktop Publishing Software
15 Days	V. Presentation Software
5 Days	VI. Personal Web Page Design

Specific Educational Objectives to be Taught:

5 Days

I. Word Processing
    a. Toolbars
    b. Review of Basics
    c. Format Enhancements
    d. ClipArt/WordArt

15 Days

II. Relational Databases
    a. Review of Basics
    b. Multiple tables (Relationships and Linking) Short and Simple
    c. Calculated fields in tables and queries
    d. Modifying, and Enhancing Reports
    e. Legal Issues
    f. Troubleshooting

III. Applications in Spreadsheets
    a. Review of Spreadsheets
        i. Absolute Cell Reference
        ii. Adjusting Row Heights, and Column Width
    b. Formulas and Functions
        i. Ave, Max, Min, Count, Sum
        ii. If, SUMIF, COUNTIF, PMT
        iii. Optional Amortization

30 Days

    c. Applying Advanced Formats to Worksheets and Charts
        i. Conditional Formatting
        ii. Merging Cells and Clearing the Merge
        iii. Hiding Cells, Columns, Rows
        iv. Making Your Work Unique
        v. Enhance the Chart Background
        vi. Adding Comments to a Cell
    d. Filtering and Extracting Data
    e. Importing, Exporting, and Integrating Data
    f. Using Templates
        i. Using Available Templates
        ii. Creating your own Templates(optional)
    g. Working with Multiple Worksheets and Workbooks
    h. Legal Issues
    i. Troubleshooting

IV. Using Desktop Publishing Software
    a. Review of Basics

| 15 Days |

    b. Designing a Brochure
    c. Designing a Newsletter(Multiple Pages)
      i. Import Articles
    d. Legal issues
    e. Troubleshooting

V. Presentation Software

| 15 Days |

    a. Review Presentation Modifications and Enhancements
    b. Discuss Established Guidelines of an Effective Presentation
    c. Delivering and Critiquing a Presentation

VI. Web Page Designs
    a. Web knowledge
    b. Purposes for Web Pages

| 5 Days |

    c. Use a software package for designing a personal web Page
    d. Using HTML Formatting (Optional)
    e. Using HTML to add or resize graphic objects in a web document (Optional)
    f. Legal Issues

ASSESSMENTS

Teachers will develop formative and summative assessments based on these rubrics:
    Database Development
    Applications of Spreadsheets
    Designing a Web Site
    Desktop Publishing
    PowerPoint Presentation

Teachers will work collaboratively to develop a Challenge Assessment for this course.

EXCEL SPREADSHEET GRADING RUBRIC

Standard	Advanced	Proficient	Basic	Below Basic
Standard #1: Is able to accurately and effectively utilize information in an existing spreadsheet	Demonstrates mastery over the process of utilizing spreadsheet information.	Carries out the use of spreadsheet information without significant error	Makes significant errors when using spreadsheet information	Makes critical errors when using spreadsheet information
Standard #2: Is able to accurately create a new spreadsheet	Demonstrates mastery over the process of creating a spreadsheet	Carries out the creation of a new spreadsheet without significant error	Makes significant errors when creating a spreadsheet	Makes critical errors when creating a spreadsheet
Standard #3: Is able to create graphs from spreadsheet data	Demonstrates mastery over the process of creating graphs from a spreadsheet	Carries out the creation of graphs from a spreadsheet without significant error	Makes significant errors when creating graphs from a spreadsheet	Makes critical errors when creating graphs from a spreadsheet

Rubric: Database Development

Criteria	Advanced	Proficient	Basic	Below Basic
Accuracy Correctness, precision, conformity to standard **20 points**	☐ Correct sizes and types of fields were chosen (field definition), and data were properly aligned. ☐ All relevant data were identified and entered correctly in proper fields with no spelling errors. ☐ All duplication of data was eliminated. ☐ Design documentation was complete for each table and for the database as a whole.	☐ One error in field definition and alignment did not interfere with understanding report. ☐ One error in identifying and entering data, or in spelling, did not interfere with using reports. ☐ Only one data item was duplicated. ☐ Design documentation was complete although it contained one error.	☐ Two errors in field definition and alignment were serious enough to interfere with understanding report. ☐ Reports could be used, two errors in identifying and entering data, or in spelling, caused delay or other problems. ☐ Two data items were duplicated. ☐ Design documentation was missing critical information.	☐ Reports were unusable because of errors in alignment and field definition. ☐ Reports could not be used because of errors in data or in spelling. ☐ Duplication of data caused considerable waste when reports were used. ☐ Design documentation did not reflect the composition of the database.
Output The final product and its retrieval **20 points**	☐ All request reports were generated accurately. ☐ Updated reports reflected accurate changes and additions to data. ☐ Information on reports was sorted accurately. ☐ Reports had concise, meaningful headings that accurately described data being reported.	☐ All requested reports were generated with only one error. ☐ One error in changes and additions to data did not interfere with use of reports. ☐ One error in sorting did not limit use of reports. ☐ Reports had general headings to describe data.	☐ Most requested reports had two errors. ☐ Two changes and additions were reflected inaccurately on updated reports. ☐ Two errors in sorting information appeared on reports. ☐ Some report headings were incomplete, or did not reflect data.	☐ Requested reports were unavailable. ☐ Many changes and additions to database were missing or inaccurate. ☐ Reports contained much inaccurately sorted data. ☐ Many headings on reports did not reflect data being incomplete/missing.
Appearance Visual effect **10 points**	☐ Reports were logically formatted, error-free, and stylistically consistent throughout. ☐ Data entry forms were neat, attractive, and easy to use.	☐ Reports were logically formatted, error-free, with minor inconsistencies in style that did not detract from the report. ☐ Data entry forms were easy to use, but were dull or messy.	☐ Reports included distracting errors in formatting, or contained enough variations in style to appear unprofessional. ☐ Data entry forms required some study to use.	☐ Improper formatting and stylistic inconsistencies made reports quite difficult to read. ☐ Data entry forms were user-unfriendly.

Rubric: Designing a Web Site

Criteria	Advanced	Proficient	Basic	Below Basic
Content Information provided by the web site. **30 points** **Definitions:** Appeal: excites visitor to further investigation. Acceptable: visitor is satisfied but not excited by web site.	☐ Web site's content was grammatically correct and free of punctuation, spelling, capitalization, and syntax errors. ☐ Website provided accurate, reliable content that satisfied its purpose. ☐ Content was presented in reader-friendly chunks, organizational aids (e.g., bullets, headings, side-headings, etc.) were used effectively. ☐ Author/Sponsor could be easily identified; full contact information was provided. ☐ Information, vocabulary and language appealed to targeted audience; content of screens was tailored to audience. ☐ Content of web pages was easy to understand due to the use of a logical progression of ideas.	☐ Web site's content was free of grammar and spelling errors; punctuation, capitalization, and syntax errors did not limit visitor's understanding. ☐ Web site provided accurate, reliable content but included some information unrelated to its purpose. ☐ Content was presented in reader-friendly chunks, organizational aids were used sparingly. ☐ Author/Sponsor could be easily identified, contact information was sketchy. ☐ Information, vocabulary, and language were acceptable to targeted audience. Content of web pages was easy to understand but few (3 or less) ideas needed to be reorganized.	☐ Web site's spelling, grammatical and syntax errors were distracting. ☐ Web site's accuracy and reliability were questionable; its content sent mixed messages about the purpose of the site. ☐ Content was inconsistent in its use of chunking; organizational aids were rarely used. ☐ Author/Sponsor could be easily identified; only an e-mail address was provided for further contact. ☐ Information was acceptable, but vocabulary and language left targeted audience uncomfortable. Content of web pages was vague in spots due to needed reorganization of ideas.	☐ Web site's content contained so many spelling, grammatical, punctuation, capitalization, and syntax errors that its message was unclear. ☐ Web site provided inaccurate and/or unreliable content; its purpose could not be discerned. ☐ Content was unnecessarily lengthy and did not contain organizational aids. ☐ Name of author/sponsor was not found; only an e-mail address was provided for further contact. ☐ Information, vocabulary, and language were inappropriate for/unappealing to targeted audience. ☐ Content of web pages was ambiguous and presented in a haphazard manner.

Organization The flow of text, graphics, and pictures; the way in which the web site was put together. **20 points**	☐ Clear, logical organizational system of grouping, labeling, and graphically arranging information met visitor's expectations. ☐ Visitor was able to determine where s/he was at any given time; easily moved around web site with any confusion. ☐ Appropriate number of menus was provided so that the visitor was able to access desired information quickly, without having to click through an endless series of nested menus. ☐ All pages linked together and were functional.	☐ Author/Sponsor used a clear, logical organizational system of grouping and graphically arranging information; however, labeling was not intuitive for the visitor. ☐ Visitor was able to determine where s/he was at any given time; moving around the web site could have been simplified. ☐ Number of menus occasionally slowed down the visitor's access to desired information. ☐ All pages linked together; most links were functional. ☐ A few (3 or less) pages contained to many graphics.	☐ Author/Sponsor used a clear organizational system for graphically arranging information; additional work needed on grouping and labeling of information. ☐ Visitor occasionally questioned where s/he was on the web site; moving around the web site could have been improved. ☐ Too few/many menus hindered access to information on the web site. ☐ Visitor encountered a number of dead links, but all pages linked together. ☐ Several pages contained too many images.	☐ Fuzzy/illogical organizational system made visitor unable to predict what to expect from the web site when clicking on menus or links. ☐ Visitor was unsure as to where s/he was on the web site at any given time; visitor got lost moving around the web site. ☐ Number of menus seemed endless so that the visitor gave up on finding the desired information. ☐ Visitor had to close the web site to return to desired pages; the web site had few (3 or less) functional links.
Layout & Design All aspects that contribute to the appearance of the web site. **50 points**	☐ Home page created a positive first impression; attractive, eye-catching, and interesting. ☐ Website was carefully designed for its target audience and to fit the dimensions of the average computer screen. ☐ Graphics were clear in intent and relevant. ☐ Web site maintained consistent rhythm, format, and unity throughout that reinforced graphic identity and provided sense of place.	☐ First impression of home page was that it was attractive and interesting; but lacked the pizzazz needed to be eye-catching. ☐ Web site was carefully designed for its target audience; content extended beyond the dimensions of the average computer screen. ☐ Graphics were clear in intent and relevant; appearance of graphics was inconsistent. ☐ Web site maintained consistent rhythm and format, but unity needed	☐ First impression of home page was that it needed minimal work to be attractive and interesting; lacked pizzazz. ☐ Web site's design occasionally appeared inappropriate for its target audience; content extended beyond the dimensions of the average computer screen. ☐ Intent of graphics was clear; their relevance and appearance were inconsistent. ☐ Web site maintained	☐ Home page created a negative first impression; unattractive and bland, visitor quickly moved on to another site. ☐ Web site's target audience could not be ascertained from its design; constant horizontal and vertical scrolling was required to view web pages. ☐ Visitor questioned the intent and relevance of web-site graphics. ☐ Entire web site laced consistent rhythm, format, and unity so that

☐ All web pages had one focal point with other components tying in around it. ☐ Clearly visible, relevant links were provided and took visitor to desired locations. ☐ Size and positioning of images and use of animation created interest and enhanced the web site's purpose. ☐ Overall appearance showed flair and originality that was inviting and pleasing to the eye. ☐ Color was used appropriately to contrast with text; its use attracted attention and created interest in the web site. ☐ Appropriate size and face of fonts were chosen so that fonts contributed to readability and desired style; font size varied appropriately for headings and text. ☐ Design complemented web site's purpose and tome with white space used appropriately to present an uncluttered appearance and to be pleasing to the eye.	additional work. ☐ Most web pages had one focal point, with other components tying in around it. ☐ Clearly visible, relevant links were provided; visitor did not always end up in right location, and/or links were dead. ☐ Size and positioning of images and use of animation were not distracting to the visitor and supported the content of the web site. ☐ Overall appearance was pleasing, but not attention-grabbing. ☐ Color was used appropriately to contrast with text; its use was pleasing but not attention-grabbing. ☐ Font size and face were easy to read, but did not contribute to overall style of presentation. ☐ Design complemented web site's purpose and tone, but white space seemed somewhat out of balance.	consistent rhythm; format and unity needed additional work. ☐ Most web pages had one focal point, but other components seemed disconnected. ☐ Links were provided but did not attract visitor's attention; visitor did not always end up in right location, and/or links were dead. ☐ Size and positioning of images and use of animation were minimally distracting. ☐ Color contrast was insufficient in a few (3 or less) places; its use had little effect on the overall web site. ☐ Font sizes and faces appeared unrelated to web site's style, although information could be read with little difficulty. ☐ Design was adequate to support web site's purpose and tone, but too little/much white space left layout looking cramped or elements unrelated.	web pages appeared unrelated. ☐ Components of the web page appeared disconnected with no clear focal point. ☐ Links were not located on the web site. ☐ Size and positioning of images were not appropriate or visually appealing throughout the web site. ☐ Overall appearance was mundane and flavorless and did not attract the visitor. ☐ Color contrast was insufficient throughout the web site; its use was bland or overpowering. ☐ Size and face of fonts did not support the web site's style and were difficult to read. ☐ Design was inappropriate for the web site's purpose and tone, with white space too prominent or unequal to the task.

Rubric: Desktop Publishing

Criteria	Advanced	Proficient	Basic	Below Basic
Layout and Design All aspects that contribute to the appearance of the piece **25 points**	☐ Margins and white space effectively used to be pleasing to the eye. ☐ Appropriate size and face of fonts were chosen; fonts contributed to the readability and helped to create the desired style. ☐ Size and weight of headlines attracted attention and guided the eye. ☐ Overall appearance showed flair and originality that was inviting and pleasing to the eye. ☐ Information was clearly legible and not overpowered by graphics.	☐ Design was well done with adequate margins, although white space was somewhat out of balance. ☐ Font size and face were easy to read, but did not contribute to overall style of document. ☐ Size and weight of headlines attracted attention, but did not guide the eye. ☐ Overall appearance was pleasing, but not attention grabbing. ☐ Information and graphics seemed to have equal weight on the page. .	☐ Design was adequate, but too much/little white space left layout looking cramped or elements looking unrelated. ☐ Font sizes and face appeared unrelated to product's message/purpose and tone, although information could be read with little difficulty. ☐ Headlines did not attract attention. ☐ Overall appearance was not unique. ☐ Information was legible, but graphics were distracting.	☐ Margins and white space too prominent or unequal to the task. ☐ Size and face of the fonts were difficult to read. ☐ Headlines were too small or too large for position on the page. ☐ Overall appearance did not attract the reader. ☐ Information was difficult to read or overpowered by graphics.
Content The information communicated by the piece **20 points**	☐ Project contained accurate, complete, documented information. ☐ Caption matched graphics and was appropriate in length. ☐ Project was grammatically correct, error-free, and easy to understand. ☐ Information and language appropriate for targeted audience.	☐ Project contained complete documented information with minor errors that did not limit the understanding of project message. ☐ Captions matched graphics with minor errors that did not cause misunderstanding. ☐ Spelling and grammatical errors did not limit the understanding of projects message. ☐ Information and language was acceptable for targeted audience.	☐ Project contained some errors that could result in misunderstanding. ☐ Captions contained lengthy explanations of graphics. ☐ Project's spelling and grammatical errors were distracting. ☐ Information was acceptable , but use of language left the targeted audience unclear of the objective.	☐ Project contained numerous errors, and lacked documentation. ☐ Captions did not clearly describe the graphics or were omitted. ☐ Project contained so many spelling and grammatical errors that its message was unclear. ☐ Information and language were inappropriate for targeted audience.

Graphics and Illustrations All elements that are not text **15 points**	☐ Graphics were appropriate and supported/completed project's message. ☐ All graphics and illustrations were sized, scaled, cropped, and positioned to appeal to the reader. ☐ Color use attracted attention and created interest in the document.	☐ Chosen graphics were appropriate but did not add to project's message. ☐ Size, scale, cropping, and positioning of graphics and illustrations were not distracting to the reader. ☐ Color use was pleasing, but not attention-grabbing.	☐ Graphics were easily overlooked when considering the overall project. ☐ Graphics were minimally distracting because of size, scale, cropping, or position. ☐ Color use had little effect on the overall project.	☐ Graphics were inappropriate for the project. ☐ Size, scale, cropping, and position of graphics were not appropriate or visually pleasing. ☐ Color use was uninteresting or overpowering.

Rubric: PowerPoint Presentation

Criteria	Advanced	Proficient	Basic	Below Basic
Content **5 points**	☐ Information is completely accurate, relevant, engaging, and critical thinking/research are evident.	☐ 2 or less facts inaccurate, knowledge of subject and research are incomplete.	☐ 4 or more facts are inaccurate, demonstrate little knowledge of subject, little research.	☐ Inaccurate information, not developed, lack of critical thinking and research.
Spelling and Grammar **5 points**	☐ Presentation has no misspellings or grammatical errors.	☐ Presentation has no more than 2 misspellings and/or grammatical errors, which did not hinder presentation.	☐ Presentation had 3 misspellings and/or grammatical errors.	☐ Student presentation had 4 or more misspelling and/or grammatical errors which hindered delivery of presentation.
Organization and Sequence **5 points**	☐ Student presents information in a logical, interesting, creative, and appealing sequence which audience can follow.	☐ Student presents information in a logical sequence which audience can follow.	☐ Audience had difficulty following presentation because student jumps around.	☐ Audience cannot understand presentation because there is no sequence of information.
Design **5 points**	☐ Use of slides that are balanced, proportional, have style and pizzazz that capture and hold the audience.	☐ Graphics and color appropriate to topic and support the message.	☐ Little support in slide design regarding topic, background is unrelated.	☐ Blank, confusing and cluttered slides. Exaggerated effort on graphics and special effects.
Enhancements and Creativity **5 points**	☐ All graphics are appropriate and contribute to presentation.	☐ Most graphics enhance and are appropriate to presentation. (4 or more)	☐ Limited graphics and special effects (3 or less)	☐ No graphics and/or special effects
Sources **5 points**	☐ All sources of information are properly cited to determine credibility.	☐ Most sources(4 or more) use proper citation to check accuracy.	☐ Few (3 or less) sources and sometimes appropriate citation guidelines are used.	☐ No sources are included. No method to check validity of information.
Delivery **5 points**	☐ Student uses clear voice, eye contact, strong voice projection, and correct and concise pronunciation.	☐ Student voice is clear, pronounces most words correctly.	☐ Student incorrectly pronounces terms and audience has difficulty hearing presentation.	☐ Student mumbles, incorrectly pronounces terms and speaks too quietly for all of audience to hear.

Required/Approved Textbooks and Materials:

To be determined