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EDTL 604: Unit 7
Designing Standards-Based Instruction
May 4, 2007

Subjects: Microsoft (MS) Office 4 You
Grade Level: 12
Number of Students: 15
Time: 4 Classes (1 hour / class)

PA Standards Addressed:
1. Inquiry and Design
<u>Benchmark:</u>
3.2.12.B. Evaluate experimental information for appropriateness and adherence to relevant science processes.

- Evaluate experimental data correctly within experimental limits.
- Interpret results of experimental research to predict new information or improve a solution.

3.2.12.B.D. Analyze and use the technological design process to solve problems.

- Assess all aspects of the problem, prioritize the necessary information and formulate questions that must be answered.
- Propose, develop and appraise the best solution and develop alternative solutions.
- Implement and assess the solution.
- Evaluate and assess the solution, redesign and improve as necessary.
- Communicate and assess the process and evaluate and present the impacts of the solution.

2. Technology Education
<u>Benchmark:</u>
3.6.12.B. Analyze knowledge of information technologies of processes encoding, transmitting, receiving, storing, retrieving and decoding.

- Apply and analyze advanced information techniques to produce a complex image that effectively conveys a message (e.g., desktop publishing, audio and/or video production).
- Analyze and evaluate a message designed and produced using still, motion and animated communication techniques.
- Describe the operation of fiber optic, microwave and satellite informational systems.
- Apply various graphic and electronic information techniques to solve real world problems (e.g., data organization and analysis, forecasting, interpolation).

3. Technological Devices

<u>Benchmark:</u>

3.7.12.A. Apply advanced tools, materials and techniques to answer complex questions.
- Demonstrate the safe use of complex tools and machines within their specifications.
- Select and safely apply appropriate tools, materials and processes necessary to solve complex problems that could result in more than one solution.

3.7.12.C. Evaluate computer operations and concepts as to their effectiveness to solve specific problems.
- Describe and demonstrate atypical software installation.
- Analyze and solve hardware and advanced software problems.
- Assess and apply multiple input and output devices to solve specific problems.

3.7.12.D. Evaluate the effectiveness of computer software to solve specific problems.
- Design and apply advanced multimedia techniques.
- Evaluate the effectiveness of the computer as a presentation tool.
- Analyze the legal responsibilities of computer users.

3.7.12.E. Assess the effectiveness of computer communications systems.
- Assess the effectiveness of a computer based communications system.
- Transfer files among different computer platforms.
- Analyze the effectiveness of on-line information resources to meet the needs for collaboration, research, publications, communications and productivity.

Introduction

The purpose of this unit is that students will learn to incorporate MS. Office software in the project or assignment. Students need to have this software knowledge to help them complete assignments or daily tasks. This lesson will prepare students to be able to explore and expand their knowledge in MS. Office software. In the end, this lesson will benefit students in their daily as well as college lives.

Performance Objectives:

At the end of this class, the students will be able to:
- Utilize MS. Word to create and modify letter,
- Utilize MS. Excel to create spreadsheet and graph and to calculate simple statistic data,
- Utilize MS. PowerPoint to incorporate data and graph in the presentation and handout,
- Utilize MS. Publisher to publish a large publication
- Incorporate MS. Office in their future project

Resources Available or Necessary Materials Needed
- Computer lab with the capacity of at least 15 computers equipped with MS. Word, Excel, PowerPoint, and Publisher
- Floppy Disk, Blank CD, and Flash Drive
- Instructor's Computer with Projector and Screen
- Interactive Whiteboard (if possible)
- State population data

Pre-Requisite Knowledge
- Basic Computer
- Basic MS. Office
- Basic Math

Learning Activities

Class 1: Letter with MS. Word

1. MS Office Basic Features
    • Create, Open, Save, and Print Document
    • Copy, Cut, and Paste
    • Redo and Undo
    • Spell Check
    • Text and Font
2. MS Word Basic Features
    • Tables
    • Bullets and Numbering
    • Images and Objects
    • Paragraph
3. Randomly assign each student with State name and data for the State population project (Population data by ethnicities and genders)
4. Assign students to write teacher a letter by using MS. Word to inform about the project student is assigned to do

Class 2: Spreadsheet and Graph with MS. Excel

1. MS Excel Basic Features
    • Worksheet and Workbook
    • Column, Row, and Cell Properties
    • Basic Formulas
    • Graphs and Charts
2. Assign students to create their assigned state population spreadsheet according to the data provided from previous class
3. Assign students to sum the total number and calculate percentage of each category (By ethnicities and genders)
4. Assign students to create their preference graph from the data and encourage them to continue work on the graph in order to find the best one.

Class 3: Presentation with MS. PowerPoint

1. MS PowerPoint Basic Features
     • PowerPoint Views
     • New Slide and New PowerPoint
     • Slide Design and Slide Layout
     • Insert and Edit Text & Objects
     • Print Slides and Handouts
 2. Assign students a homework to create PowerPoint presentation (Minimum of 4 slides excluding title and ending slides) on State population by using the data and graph from spreadsheet
 3. Assign students a homework to print out final presentation in the handout format

Class 4: Poster with MS. Publisher

1. MS Publisher Basic Features
     • Page Setup
     • Publication Designs
     • Color Schemes
     • Font Schemes
     • Placeholders (Text, Pictures, Clip Arts, Word Arts, and AutoShapes)
 2. Assign students a homework to create a poster about State population (Required size = 18" x 24" ; portrait or landscape)
 3. Assign each student a wall area in the class to put up the final poster and presentation handout

Assessment Process or Procedures
- Students and their works will be assessed by the following rubrics.
- Students will also be examined in the computer laboratory to evaluate their competency to use MS. Office software.

LESSON PLAN RUBRIC

Class 1: Letter with MS. Word Rubric

Criteria	3	2	1
1. Organization	Are little spelling and grammar errors. Design is good.	Are several spelling and grammar errors. Design needs some improvement.	Are numerous spelling and grammar errors. Design is very poor.
2. An ability to operate technology.	Performs routine tasks independently with a minimum of assistance	Performs some routine tasks independently with an assistance	Is unable to perform.

Class 2: Spreadsheet and Graph with MS. Excel Rubric

Criteria	3	2	1
1. Organization	Spreadsheet layout is good.	Spreadsheet layout needs improvement.	Spreadsheet layout is very poor.
2. Graph	Graph is used to make points.	Graph is used.	Graph is not used.
3. Formulas	Formulas are used with a few errors.	Formulas are used with several errors.	Formula is not used.
4. An ability to operate technology.	Performs routine tasks independently with a minimum of assistance	Performs some routine tasks independently with an assistance	Is unable to perform.

Class 3 & 4: MS. PowerPoint and Publisher Rubric

Criteria	3	2	1
1. Organization	Are little spelling and grammar errors. Design is good.	Are several spelling and grammar errors. Design needs some improvement.	Are numerous spelling and grammar errors. Design is very poor.
2. Placeholders / Graphic	Graphics are used to make points.	Graphics are used.	Graphics are not used.
3. An ability to operate technology.	Performs routine tasks independently with a minimum of assistance	Performs some routine tasks independently with an assistance	Is unable to perform.