

Computer Applications

[Implement start year (2013-2014)]

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Unit 3 Managing, Manipulating, & Visually Displaying Information

Stage 1 – Desired Results

Established Goals

2009 NJCCC Standard(s), Strand(s)/CPI #
(<http://www.nj.gov/education/cccs/2009/final.htm>)

Common Core Curriculum Standards for Math and English
(<http://www.corestandards.org/>)

Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

Standard 9.1 21st Century Life & Career Skills: All students will demonstrate creative, critical thinking, collaboration and problem solving skills to function successfully as global citizens and workers in diverse ethnic and organizational cultures.

Standard 9.4 Career and Technical Education: All students who complete a career and technical education program will acquire academic and technical skills for careers in emerging and established professions that lead to technical skill proficiency, credentials, certificates, licenses and/or degrees.

21st Century Themes (www.21stcenturyskills.org)

- Global Awareness
- Financial, Economic, Business and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy

21st Century Skills

Learning and Innovation Skills:

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Information, Media and Technology Skills:

- Information Literacy
- Media Literacy
- ICT (Information, Communications and Technology) Literacy

Life and Career Skills:

- Flexibility and Adaptability
- Initiative and Self-Direction

	<p>___ Social and Cross-Cultural Skills ___ Productivity and Accountability ___ Leadership and Responsibility</p>
<p><u>Enduring Understandings:</u> <i>Students will understand that . . .</i></p> <p><i>EU 1</i> spreadsheets are used in many facets of life.</p> <p><i>EU 2</i> database software is an extremely important tool</p>	<p><u>Essential Questions:</u></p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> • How can spreadsheets be used in business and in everyday life? • Why is it beneficial to use spreadsheets to organize, display, and analyze data? • How is data effectively communicated? <p><i>EU 2</i></p> <ul style="list-style-type: none"> • When would you use a database to organize information? • Why is it beneficial to use a database to organize and report information? • How can one effectively use the tools available in a database to manage information? • How can one effectively use the tools available in a database to generate reports?
<p><u>Knowledge:</u> <i>Students will know . . .</i></p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> • key terms related to spreadsheets • how to create formulas in a spreadsheet • apply enhancement features to a spreadsheet • how to enhance and create charts so they are more visually appealing 	<p><u>Skills:</u> <i>Students will be able to . . .</i></p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> • define key spreadsheet terms • create a spreadsheet utilizing proper formatting skills • create formulas in a spreadsheet • enhance a spreadsheet through bolding and/or italicizing data, borders, clipart, shading, & alignment of data • create pie, column, and bar charts • create and enhance charts using various elements such as chart type and style, design, layout, labels, formats

EU 2

- key terms relating to database
- how to distinguish between table, query, forms, and reports
- how to create & design a table
- how to create & design a query
- how to create & design a report
- purpose of using filters/sorting

EU 2

- define key database terms
- create and design a table
- create and design a query
- create and design a report
- create a report from a query
- apply filters and sort items within a table

Stage 2 – Assessment Evidence

Recommended Performance Tasks: *Each unit must have at least 1 Performance Task. Consider the GRASPS form.*

- You are employed in the accounting department of Comp Tech, Inc. Your supervisor wants you to generate an expense report comparing the expected budget figures vs. actual budget figures for last month's company picnic. You will be given the budget figures for all costs involved. You are to figure out if you were on budget, under budget or over budget. A visual display must also be generated detailing the exact individual costs associated with the picnic. Your data and chart will be evaluated by the accounting department supervisor. (EU1)
- You are employed in the human resource department of Comp Tech, Inc. The head of the human resource department has asked you to create a report of the names of employees attending the picnic from each department to forward to the President of Comp Tech. You will be provided with all employee's names and departments. You will be evaluated on accuracy of information & design. (EU2)

Other Recommended Evidence: *Tests, Quizzes, Prompts, Self-assessment, Observations, Dialogues, etc.*

- Quiz on spreadsheet vocabulary
- Quiz on database vocabulary
- Skittles Project (students tabulate number of skittles, perform calculations & display data visually)
- Create an iPod database

Stage 3 – Learning Plan

Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: *Consider the WHERETO elements. Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer.*

- Define spreadsheet vocabulary (A)
- Define database vocabulary (A)
- Create a budget in spreadsheet software (A, M, T)
- Calculate payroll in spreadsheet software (A, M, T)
- Analyze data & create a chart from spreadsheet data (M, T)
- Create a baseball card database (A, M, T)
- Produce reports in database files (M, T)

Suggested timeline: 7.5 weeks

- Spreadsheet: 5 weeks
- Database: 2.5 weeks

Vocabulary:

- spreadsheet
- database
- budget
- payroll
- inventory