

## INTRODUCING MICROSOFT OFFICE PRODUCTS IN A HIGH SCHOOL CLASSROOM

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*Resumen:* En el presente artículo lo que propongo es el diseño de un curso para alumnos de secundaria. Dicho curso se centra en el aprendizaje de diversas herramientas ofimáticas: Microsoft Office. El alumno aprenderá a manejar Microsoft Word, Excel, Access y PowerPoint. Al finalizar el curso el alumno deberá realizar un proyecto donde ponga en práctica todas las herramientas aprendidas.

*Palabras clave:* Microsoft Word, Microsoft Excel, Microsoft Access, Microsoft PowerPoint, objetivos, estrategias de enseñanza, evaluación.

*Abstract:* This article proposes a course design to facilitate the use of basic keyboard functions to guide high school students through the creation of documents and to enhance their ability to navigate each application of the Microsoft Office Suite. Students will learn to use Microsoft Word, Excel, Access, and PowerPoint. At the end of the course, I have designed a final project that will require all students to put into practice different functions within the Microsoft Office Suite.

*Keywords:* Microsoft Word, Microsoft Excel, Microsoft Access, Microsoft PowerPoint, instructional goals, Instructional Strategies, assessment.



## 1. SCENARIO

In learning Microsoft Applications, students struggle with basic keyboard functions and simple elements within these programs. Instructional Technology teachers express concern about the skills of their students because they tend to type using their index fingers and find it difficult to navigate Microsoft Office programs.

## 2. GENERAL OBJECTIVES

1. Integrate the use of correct keyboard finger positions when typing in Microsoft Office products.
2. Combine program terminology with fundamental navigational tasks within the Microsoft Office products.
3. Utilize various functions within Microsoft Word.
4. Apply the different functions within Microsoft PowerPoint.
5. Apply the different functions within Microsoft Excel.
6. Apply the various functions within Microsoft Access.
7. Integrate the four Microsoft Office products into a unit project.

## 3. RESOURCES

<i>Content Resources</i>	<i>Technology Resources</i>
<ul style="list-style-type: none"> <li>• Semester syllabus</li> <li>• Course tutorials</li> <li>• Previous project examples</li> <li>• Microsoft Office Software and Licenses</li> <li>• Web resources</li> <li>• Graphics for instructional purposes</li> <li>• Pre-course survey</li> <li>• Pre-test of instructional material</li> <li>• Course evaluations</li> <li>• Objective assessment materials</li> </ul>	<ul style="list-style-type: none"> <li>• 1 computer per student</li> <li>• LCD projector</li> <li>• Digital Board</li> <li>• Internet Access</li> <li>• Available hard drive space</li> <li>• Calendar software for organizing instructional events</li> <li>• Software for home key tutorials and navigational tutorials.</li> <li>• Microsoft Office Products (Word, Excel, PowerPoint, Access)</li> </ul>



<i>Instructional Facilities</i>	<i>Human Resources</i>
<ul style="list-style-type: none"> <li>• One computer lab (that can accommodate the technology resources required)</li> <li>• Library time also available after school.</li> </ul>	<ul style="list-style-type: none"> <li>• 1 qualified facilitator for teaching the course</li> <li>• Subject Matter Specialists</li> <li>• Media Specialists</li> <li>• Information Technologists for system maintenance</li> </ul>

#### 4. SPECIFIC OBJECTIVES

##### *Instructional Goal #1:*

1. In a simulated office environment, demonstrate proper use of the key positions on the keyboard correctly.
2. In a simulated office environment, demonstrate proper keyboard techniques while typing.

##### *Instructional Goal #2:*

1. On an actual computer screen, label the positions of program terminology (menu bar, task bar, toolbars, etc.).
2. In a computer lab, identify the location and functions of the basic features of the program terminology (open, save, close, begin a new document, etc.).
3. In a simulated interview with an employer, list 4 purposes that the basic features serve in each of the Microsoft Office products.

##### *Instructional Goal #3:*

1. In a collaborative group, identify 5 of the various documents that can be produced using Microsoft Word.
2. Using mnemonic strategies, list the steps for creating a new Microsoft Word document.
3. In a computer lab, use the basic features of program terminology to format and edit a document.
4. In a simulated business training session, describe the steps for navigating through creating styles, outlines, tables, and table of contents.
5. In a simulated office environment, demonstrate the ability to create styles, outlines, tables, and table of contents.
6. In a lab environment, create a document that exhibits the basic functions of Microsoft Word, including each of the learned aspects.



*Instructional Goal #4:*

1. In collaborative groups, identify three of the various documents that can be produced using Microsoft PowerPoint.
2. In a simulated office environment, explain the purpose of defining the audience before creating a presentation.
3. In a lab setting, identify the function of design templates and text layouts.
4. In a simulation business meeting setting, demonstrate the application of a design template with a slide layout of a presentation within Microsoft PowerPoint.
5. In a simulated work environment, correctly apply each of the following to a notes page in a Microsoft PowerPoint presentation: bulleted lists, numbered lists, and add notes.
6. In a computer lab, apply a slide color scheme to add color and background images in a blank presentation.
7. On the actual computer screen, identify the location of clipart, tables, and other formatting tools within Microsoft PowerPoint.
8. In a simulated work environment, apply clipart, tables, and other types of formatting tools to a Microsoft PowerPoint presentation.
9. In a lab setting, navigate through the Internet to find graphics to enhance and insert in a slide show presentation.
10. In a simulated business setting, list the steps involved in making a presentation to an audience.
11. In a lab setting, create a Microsoft PowerPoint presentation including each of the basic functions discussed.

*Instructional Goal #5:*

1. In collaborative pairs, identify five of the various documents that can be produced using Microsoft Excel.
2. In an original advertisement, name four instances in which a person could find Microsoft Excel beneficial.
3. In collaborative pairs, identify the steps in placing formulas, functions, and formatting into a Microsoft Excel spreadsheet.
4. In a simulated interview setting, explain the function of financial functions, data tables, amortization schedules and hyperlinks within Microsoft Excel.
5. In a computer lab, demonstrate the use of a chart wizard to build a chart within the spreadsheet.
6. In a lab setting, apply financial functions, data tables, amortization schedules, and hyperlinks to a spreadsheet correctly.



7. In a simulated business environment, create a spreadsheet that exhibits the basic functions of Microsoft Excel.

*Instructional Goal #6:*

1. In computer lab, identify four of the various documents that one can produce using Microsoft Access.
2. In a simulated interview setting, list 4 situations in which MS Access would be helpful.
3. In collaborative groups, identify the terminology used in Microsoft Access (database, object, table, field, record, design view and database view).
4. In a computer lab, list the steps for navigating through querying a database using the Select Query Window.
5. In a simulated interview setting, list three reasons for maintaining a database using the design and update features of Access.
6. In collaborative pairs, describe the steps for creating reports, forms, and combo boxes.
7. In a simulated work environment, demonstrate how to create reports, forms, and combo boxes.
8. With a simulated client from the class, create a database system that exhibits all of the basic functions (reports, forms, etc.).

*Instructional Goal #7:*

1. In an objective test, assess basic and advanced knowledge of the four Microsoft Office products.
2. In collaborative groups, identify the similarities and differences of each Microsoft Office product.
3. In a lab environment, explain three examples in which all four programs can be used in a real-life situation.
4. In a simulated business environment, tell the importance of being able to link the Microsoft Office products.



## 5. INSTRUCTIONAL STRATEGIES

<i>Title: Demonstrate the ability to create styles, outlines, tables, and tables of contents</i>		
<i>Event</i>	<i>Instructional Strategy</i>	<i>Teacher or Student Action</i>
<i>Gain Attention</i>	Ask: What are some ways you use tables or outlines? Encourage dialogue to expose students to different uses of tables and outlines within Microsoft Word.	<i>Teacher:</i> Offer good examples.
<i>Objectives</i>	In a simulated office environment, demonstrate the ability to create styles, outlines, tables, and table of contents.	<i>Teacher:</i> Review unit objectives. Describe the skills developed in this lesson.
<i>Prior Knowledge</i>	Given a pre-designed document, have the students recreate it using the exact styles.	<i>Teacher:</i> Provide the criteria for the document.
<i>Content</i>	Present examples to introduce the process of creating styles, outline, tables and table of contents. Using the textbook, step through the procedures for inserting and deleting rows and columns maintaining the format and table properties of the example.	<i>Teacher:</i> Develop the examples and the rubric. Include them as an appendix to the text.
<i>Guided Practice</i>	Offer supportive examples about the Microsoft Word styles, outline, tables and table of contents. Complete the tasks provided in the texts for each module covered making reference to the included appendix.	
<i>Independent Practice</i>	The student will create an outline for the course based on the provided syllabus. They will also be required to develop a checklist, which includes all assignments for the duration of the course by creating a table in MS Word.	<i>Teacher:</i> Provide a detailed syllabus. <i>Student:</i> Refer to the texts for help. Ask questions about the requirements.
<i>Feedback</i>	Provide opportunity for students to correct their formatting problems. When returned, the teacher will note on the rubric where each student lost points.	<i>Teacher:</i> Provide instruction for making corrections.
<i>Assessment</i>	End of unit projects serve as a test on creating styles, outline, tables and table of contents.	



<i>Title: Demonstrate the ability to create styles, outlines, tables, and tables of contents</i>		
<i>Event</i>	<i>Instructional Strategy</i>	<i>Teacher or Student Action</i>
<i>Closure</i>	Summarize and conclude the lesson. Discuss how this lesson can be used in a real-life setting.	<i>Teacher:</i> Review the objectives.

<i>Title: Apply clipart, tables, and other forms of formatting within Microsoft PowerPoint</i>		
<i>Event</i>	<i>Instructional Strategy</i>	<i>Teacher or Student Action</i>
<i>Gain Attention</i>	Begin class with a PowerPoint presentation with an embedded video clip of the teacher engaging the students by discussing the power of PowerPoint and the objectives for the unit.	
<i>Objectives</i>	Apply clipart, tables, and other forms of formatting within Microsoft PowerPoint.	
<i>Prior Knowledge</i>	The student has previously been instructed in creating presentations catered to a designated audience using design templates and various slide layouts. Students should have previously given a brief presentation of the tasks they had completed in previous chapters placing an emphasis on the creation process.	<i>Students:</i> Recall prior knowledge and be prepared to expand upon these skills.
<i>Content</i>	In order to enhance the presentation, the students will use the recommended text for the course to develop skills in integrating the use of clipart, tables, and other formatting tools. The completion of the tasks at the end of each lesson will reinforce the instruction. The students will also be using the Internet to gather various audio and visual components to enhance the presentations.	<i>Teacher:</i> Provide some visual examples in the appendix to guide the learner. Also provide a list of helpful links containing free clipart and fonts.
<i>Guided Practice</i>	Student will be required to design a slideshow of pictures. The pictures can either be scanned or collected from the Internet. The focus of this exercise is to familiarize the student with incorporating audio and visual components within PowerPoint.	<i>Teacher:</i> Assist students who wish to scan photos and supervise appropriate material.



<i>Title: Apply clipart, tables, and other forms of formatting within Microsoft PowerPoint</i>		
<i>Event</i>	<i>Instructional Strategy</i>	<i>Teacher or Student Action</i>
<i>Independent Practice</i>	Each group of students will be required to develop a presentation based on a selected topic. The topics will be chosen at random by selecting them from a hat. Each group will be given the same rubric which serves as a grading scale.	<i>Teacher:</i> Provide choice of topics and rubric for grading.
<i>Feedback</i>	Peer consultation will provide feedback. The teacher will return the rubric outlining details that need to be re-evaluated.	<i>Teacher:</i> Provide feedback in a timely manner because following instruction builds upon this knowledge.
<i>Assessment</i>	A teacher-provided rubric along with peer consultations will provide the assessment.	<i>Teacher:</i> Rubric must be fair allowing ample room for creativity.
<i>Closure</i>	Teacher will close by connecting previous lessons and explaining future lessons.	

<i>Title: Apply financial functions, data tables, amortization schedules, and hyperlinks to a spreadsheet</i>		
<i>Event</i>	<i>Instructional Strategy</i>	<i>Teacher or Student Action</i>
<i>Gain Attention</i>	Begin by showing a commercial of a brand new car. Discuss the financial obligations of purchasing a brand new car.	
<i>Objectives</i>	Apply financial functions, data tables, amortization schedules, and hyperlinks to a spreadsheet.	
<i>Prior Knowledge</i>	The student has been instructed on setting up formulas and functions within a spreadsheet.	<i>Student:</i> Recall prior lessons on creating simple formulas.
<i>Content</i>	The context of this lesson surrounds the purchase of a brand new car. Many of the students will be around the appropriate driving age and will be interested in purchasing a car. This lesson will be dual in purpose, exposing them to wise shopping decisions and how to use Excel for financial purposes.	





<i>Title: Apply financial functions, data tables, amortization schedules, and hyperlinks to a spreadsheet</i>		
<i>Event</i>	<i>Instructional Strategy</i>	<i>Teacher or Student Action</i>
<i>Guided Practice</i>	Using the vehicle from the video each group of students will be responsible for creating an amortization schedule for the monthly payments over a period of thirty-six months. Each student will be required to use the appropriate financial functions and create appropriate data tables.	<i>Teacher:</i> Research a vehicle determining a retail price and monthly payment.
<i>Independent Practice</i>	Each student must research a dream job. The student will take the starting salary of the dream job and begin a budget for their future. The budget must include an appropriate estimate of rent, utilities, car payments, and any outstanding loans, etc. The student must prepare this budget to last over an eighteen month period. The budget should be prepared using financial functions, data tables, and amortization schedules. There are several amortization calculators on the Internet and the students may include a hyperlink to one of these.	<i>Teacher:</i> Must be supportive in reminding the students of details they would normally forget about, such as taxes and interest rates. <i>Students:</i> Must be very detail oriented.
<i>Feedback</i>	Each student will prepare a brief presentation, using PowerPoint, to discuss their budgets. Afterwards, the students will have a question and answer session to provide the presenters with feedback.	<i>Students:</i> Must integrate their prior knowledge of the use of PowerPoint.
<i>Assessment</i>	The instructor will grade according to the quality of work provided by the student. The student should demonstrate the ability to use the appropriate functions and schedules.	<i>Teacher:</i> Provide a rubric for the students to follow.
<i>Closure</i>	The teacher will close by opening discussion to the students.	<i>Teacher:</i> Decide if the students gained any new knowledge from the exercise.



Upon completion of each unit students are required to complete a unit project that is based upon a real life context. The students will be required to demonstrate several applications of the newly-learned knowledge. The students will also apply knowledge using a PowerPoint presentation.

Real life case studies will allow students to connect the use of the Microsoft Office products to real life scenarios. They will be able to recognize which product best suits each case and how to connect skills and concepts.

The students will also be required to integrate the use of the Internet for research purposes. They will need to locate relevant material such as clip art, fonts, hyperlinks, etc. to be used in various assignments providing for the combination of skills and personal creativity. The final project will facilitate the integration of all four Microsoft Office products into a single project.

Evaluation will be by continuous assessment through the presentation of skills ending each lesson. The individual tasks will provide additional input towards evaluation of newly acquired skills.

## 6. FINAL PROJECT

Now that you have completed each of the Microsoft Units, you will have a chance to combine the different applications in a contextual unit assignment.



Topic: Spring Break!!!

Directions: You are in charge of planning a spring break trip for 4 people (three friends and yourself). It is up to you to get the best deals and organize your information so that you can convince your parents into letting you go. Within each Microsoft Program you will need to create documents and include the items that are listed below. You may use the Internet, your book, and any other information that you have learned in class to complete a fun and interesting presentation. Keep in mind; your parents are your audience, HAVE FUN and BE CREATIVE!!



### *Microsoft Word*

- You must write 1 formal business letter requesting special discounts at any business that you choose (e.g. hotels, restaurants, water parks, etc.).
- Your business letter must be at least 250 words and properly formatted.
- You must write an informal letter to your parents asking them to allow you to go on this trip based on the written information you have gathered. This must be persuasive and formatted appropriately.
- Your informal letter needs to be at least 250 words.
- In each of these documents you must include at least:
  - 2 types of font
  - A bulleted list
  - A numbered list
  - A table
  - 2 graphics
  - Colored font
  - Bold and Underlined Text

### *Microsoft Excel*

- Create a budget for each of the activities that will be taking place on this trip.
- The activities list **MUST** include:
  - Food (meals, snacks, etc.)
  - Travel (bus, train, gas, plane, etc.)
  - Lodging (cabin, RV Camp, Cruise, Hotel, etc.)
  - 2 activities that you participate in (bungee jumping, day cruise, etc.)
- You may include more activities, but the ones listed above **MUST** be included. The prices for these activities must be realistic, so phone, write, or use the internet to find actual costs.
- Format budget and enter correct mathematical formulas.

### *Microsoft Access*

- Your parents will need to know where you are at all times. Create a database including all of the information for the places you will be staying, the places you will be going, and the people you will be with.
- This must also be formatted appropriately using queries, forms, etc.



*Microsoft PowerPoint*

- Prior to leaving on your trip you must convince your parents to let you go. Create a PowerPoint presentation that provides them with colorful pictures, and informative data that will help them make their decisions.
- This will be presented to the class, but consider your parents to be your audience.
- You must have used slide layouts, slide design, different fonts, animations, graphics, the slide sorter, etc.
- The last presentation that you will give to the class will be an “After the Trip” presentation. Your parents let you GO!!! So now, show all of your friends what you got to see, explore, where you stayed, how you got there, etc. Convince them that they should go on this trip next year.

For each presentation you must have at least 10 slides.

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