

Rationale

As Ohio has collaborated with the Partnership for 21st Century Skills and taken a move to increase student work ethic, self-efficacy, and creativity, among others, this causes teachers to begin focusing on those essential skills that will enable students to be successful in their futures and life. This change in thinking and teaching is an issue of interest in education forcing the P-21 concept, which “provides tools and resources to help the U.S. education system keep up by fusing the three Rs and four Cs (critical thinking and problem solving, communication, collaboration, and creativity and innovation)” (Partnership for 21st Century Skills, 2004). This instructional design focuses on these skills through the lessons that are planned to help develop technology literacy skills that address real-life concepts.

The lessons in this instructional design are detailed to be an inquiry-based instructional model as a follow-up to the direct instruction model. At the beginning the teacher uses direct instruction to build skills with the use of technology. These four lessons include activities that the students complete to seek resolutions, while gaining new information from the work. This model is utilized to demonstrate a variety of models can be used to differentiate instruction, which is always pre-planned by the teacher.

As demonstrated in the unit learner outcomes and lessons, the unit adheres to one learning theory in particular, Bloom’s Taxonomy. By including the Bloom’s levels, the students will be able to reach the higher levels of Blooms to extend their learning through the creation of a new product on their own. They will develop the skills and have practice throughout the

lesson, but have opportunities to collaborate and create additional products to support their learning.

This instructional design unit not only supports the development of 21st century skills, as an adopted initiative by the Ohio Department of Education, but also includes Bloom's Taxonomy and a purpose for targeting the issues of developing technology literate citizens. This is especially important in a society that is filled with technologies of all varieties and that is continuing to grow each day. Further, the unit provides opportunity for authentic, problem-based learning through collaborative efforts among teachers. Through this collaboration, authentic assessments could be developed and used to populate digital portfolios of student work.

Partnership for 21st Century Skills. (2004). *A Framework for 21st Century Learning*. Retrieved March 15, 2011, from <http://www.p21.org/>

Unit Outcomes

Subunit One: Word Processing - (Microsoft Word)

- The students will be able to identify the components of a document; including text and images. (knowledge)
- The students will be able to explain the various types of images that are available to be placed onto a document. (comprehension)
- The students will be able to distinguish between the different types of spacing in a document, including single-spaced, 1.5 lines, and double-spaced. (analysis)
- The students will be able to identify tools such as undo, redo cut, copy, and paste and their uses in a document. (application)
- The students will be able to identify the procedure for changing margins in a document. (application)
- The students will be able to create a document with different types of columns to represent newsletters or newspapers. (synthesis)
- The students will be able to demonstrate ways to change the font, style size, colors and underline features in a document, including bold and italics. (application)

- The students will be able to describe spell-check and the procedures for using it within a document. (application)
- The students will be able to successfully construct a document with using tools and menus within the software program and judge its usefulness. (evaluation)

Subunit Two: Spreadsheets - (Microsoft Excel)

- The students will be able to identify the components of a spreadsheet; including cells and gridlines. (knowledge)
- The students will be able to identify the differences between cell height and cell width and procedures for adjusting them within a spreadsheet. (application)
- The students will be able to analyze data that is provided to successfully create the basics of a spreadsheet. (analysis)
- The students will be able to explain the differences between values and labels in a spreadsheet. (comprehension)
- The students will be able to construct formulas/functions within a spreadsheet to produce minimum, maximum, sum, and averages of values. (application)
- The students will be able demonstrate use of the sort function to adjusting labels in ascending and descending orders. (application)
- The students will be able to successfully construct a spreadsheet using tools and menus within the software program and judge its usefulness. (evaluation)

Subunit Three: Presentations - (Microsoft PowerPoint)

- The students will be able to identify the basics of a presentation program including how to insert new slides or cards. (knowledge)
- The students will be able to explain the various types of images that are available to be placed onto a document including, clip art, Internet, digital camera, and scanned images. (comprehension)
- The students will be able to demonstrate the procedures for editing by creating text and font in a presentation, including size, font name, and style. (synthesis)
- The students will be able to rehearse and judge the timings in a presentation using animations, transitions and effects. (evaluation)
- The students will be able to successfully construct a presentation using tools and menus within the software program. (evaluation)

Pre-Assessment

**Survey and Questionnaire
“What I know about Word Processing”**

Circle the letter that best describes how you feel about the sentence.

A=Agree

D=Disagree

U=Unsure

- | | | | |
|---|---|---|---|
| 1. Components of a document include text and images. | A | D | U |
| 2. You can name more than one type of images that can be entered onto a document. | A | D | U |
| 3. Text can be spaced differently on a document. | A | D | U |
| 4. There is one type of editing tool in MS Word. | A | D | U |
| 5. Changing the margins is under the Edit Menu. | A | D | U |
| 6. Columns are used to create newsletters or newspapers. | A | D | U |
| 7. Font features include size, color, style, and underline. | A | D | U |
| 8. Name the types of images that can be placed on a document? | | | |

- How do you spell-check your document?

10. Name the keyboard shortcut for each of the following tools.

New _____

Open _____

Save _____

Print _____

Undo _____

Redo _____

Cut _____

Copy _____

Paste _____

11. Name one thing that you would like to learn about the program Microsoft Word?

Lessons

Lesson One: Word Processing

Grade Six

Standard 3: Technology for Productivity Applications

Benchmark B: Select appropriate technology resources to solve problems and support learning.

Indicator: Explain the purpose of software programs.

Objective:

The students will be able to identify the components of a document; including text and images (memory/recall).

The students will be able to demonstrate ways to change the font, style size, colors and underline features in a document, including bold and italics. (application).

Concept/Skills:

Text concepts: Font, Font Size, Color Underline, and Style

Images: Clip art

Keyboarding

Materials:

Computer for each student

Microsoft Software installed on each computer

SmartBoard Copies of typed paragraph

Procedures:

Introductory Activity:

Assess student prior knowledge by asking how many students have computers with Microsoft Word installed on them. Give students opportunities to answer and share the projects they have completed using the software program.

Assess student prior knowledge by asking questions relating to the main screen. Specific questions include:

3. What is the scroll bar on the right side of screen used for?
4. What do the words at the top of the screen, File, Edit, etc. mean?

Introduce the word document and explain its purpose.

Tell the students that they are going to use the Microsoft Word program to create a document incorporating a different/a variety of font and images.

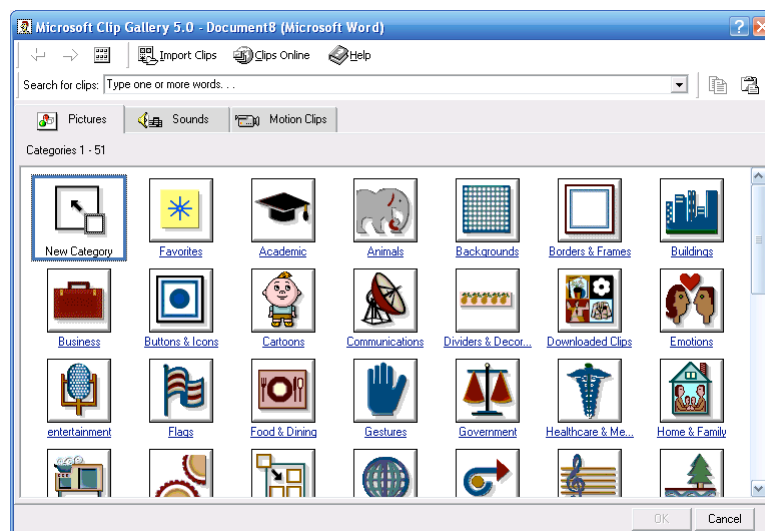
Developmental Activity:

Introduce students to the main screen when they open MS Word. Have student type the following paragraph which will be projected on the SmartBoard. Additional copies will be available for the students who have visual impairments.

Word processing applications are used more often by more people every day than any other type of computer application. The basic skills used in word processing programs are also used in one way or another in most other kinds of software. A text-only document is a bland and boring thing. You can use images to make your document look better and even to explain things to your readers more clearly.

Lead students through adjusting the font, size, color, style, and underline of the format menu. Model using the SmartBoard. They must change any part of the paragraph using each of these tools.

Assign each student to insert one selection of clip art at the bottom of the document. Model using the insert menu. It should look like this:



Concluding Activity:

Have students print their document by calling each row separately. After each document has printed each student will share their work with the class. The students will put a soft copy in their electronic portfolio.

Evaluation:

Students will complete a written homework assignment. They will write one 5-7 sentence paragraph explaining what they learned about documents, text tools, and clip art images.

Rubric grading is as follows:

Category	4	3	2	1	0
Required Elements	The paragraph includes all required elements as well as additional information.	All required elements are included in the paragraph.	All but 1 of the required elements are included on the paragraph.	Several required elements were missing.	Did not complete the assignment

Lesson Two: Word Processing

Grade Six

Standard 3: Technology for Productivity Applications

Benchmark B: Select appropriate technology resources to solve problems and support learning.

Indicator: Explain the purpose of software programs.

Objective:

The students will be able to explain the various types of images that are available to be placed onto a document (comprehension).

Concept/Skills:

Images: Clip art, Internet pictures, Scanned pictures, and Paint

Materials:

Computer for each student

Microsoft Software installed on each computer

SmartBoard

Internet Connection

Scanner

Paint program installed on each computer

Procedures:

Introductory Activity:

Assess student prior knowledge by asking them to name the types of pictures they're familiar with inserting onto a document.

Have students access Microsoft Word and open a new document. Assign students to insert one clip art picture onto the document.

Developmental Activity:

Demonstrate for students that there are more places to get a picture from to be placed onto a document such as Internet pictures, scanned pictures, and Paint.

Remind the students the procedure for how to insert clip art onto a document.

Show the students how to scan a picture and place it onto a document.

Show the students how to save a picture from the Internet and place it onto a document.

Show the students how to use the Paint program to design a picture and place it onto a document.

Have students create one document with three small pictures using three of the four ways to insert a picture onto a document. Only a few (5-6) will be able to use the scanner for this assignment.

Concluding Activity: Have students print their document by calling each row separately. After each document has printed the students will be selected randomly to share their work with the class. The students will put a soft copy in their electronic portfolio.

Evaluation:

Students will be required to bring one picture of them from home to be scanned the following day.

Lesson Three: Word Processing

Grade Six

Standard 3: Technology for Productivity Applications

Benchmark B: Select appropriate technology resources to solve problems and support learning.

Indicator: Explain the purpose of software programs.

Objective:

The students will be able to create a document with different types of columns to represent newsletters or newspapers. (synthesis)

Concept/Skills:

Scanned pictures

Columns

Keyboarding

Materials:

Computer for each student

Microsoft Software installed on each computer

SmartBoard

Internet Connection

Scanner

Procedures:

Introductory Activity:

Assess student prior knowledge by asking the procedure for scanning a picture.

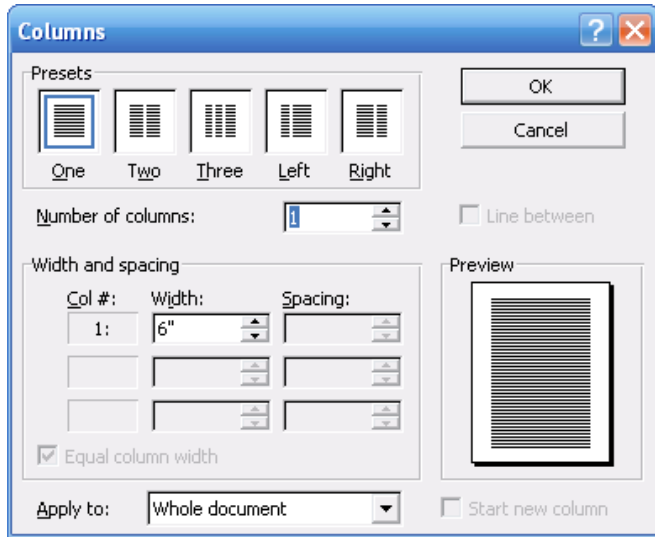
Assess student prior knowledge by asking the purposes for separating a document into columns. (i.e. newspaper or newsletter)

Have students access Microsoft Word and open a new document.

Developmental Activity:

Demonstrate for students the procedure for inserting columns into a document onto a document.

For example, choose the format menu and columns.



Students will create a newsletter with two columns including two articles with pictures and text. One picture will be scanned. The first article will be a 5-7-sentence paragraph describing personality traits such as favorite color, sports team, hobby, game, etc. The second article will be a summary of a news story taken from the Internet. They may use the second picture directly from the Internet.

During this time students will take turns scanning their picture they brought in for their homework assignment using the one of the three classroom scanners.

Concluding Activity:

Have students print their document by calling each row separately. After each document has printed the students will be selected randomly to share their work with the class.

Evaluation:

Students will complete a written homework assignment. They will write one 5-7 sentence paragraph explaining what they learned about columns and scanning pictures. The students will put a soft copy in their electronic portfolio.

Rubric grading is as follows:

Category	4	3	2	1	0
Required Elements	The paragraph includes all required elements as well as additional information.	All required elements are included in the paragraph.	All but 1 of the required elements are included on the paragraph.	Several required elements were missing.	Did not complete the assignment

Lesson Four: Word Processing

Grade Six

Standard 3: Technology for Productivity Applications

Benchmark B: Select appropriate technology resources to solve problems and support learning.

Indicator: Explain the purpose of software programs.

Objective:

The students will be able to distinguish between the different types of spacing in a document, including single-spaced, 1.5 lines, and double-spaced. (analysis)

Concept/Skills:

Keyboarding

Changing Margins

Materials:

Computer for each student

Microsoft Software installed on each computer

SmartBoard

Procedures:

Introductory Activity:

Show the students three samples of single-spaced, 1.5 lines, and double-spaced.

Ask students to describe the difference between the three samples.

Assess student prior knowledge by asking if anyone has ever used this feature to format a document.

Developmental Activity:

The students will work on keyboarding skills and type the following three paragraphs. The paragraphs can be displayed on the SmartBoard or copies are available for students to use at their seat.

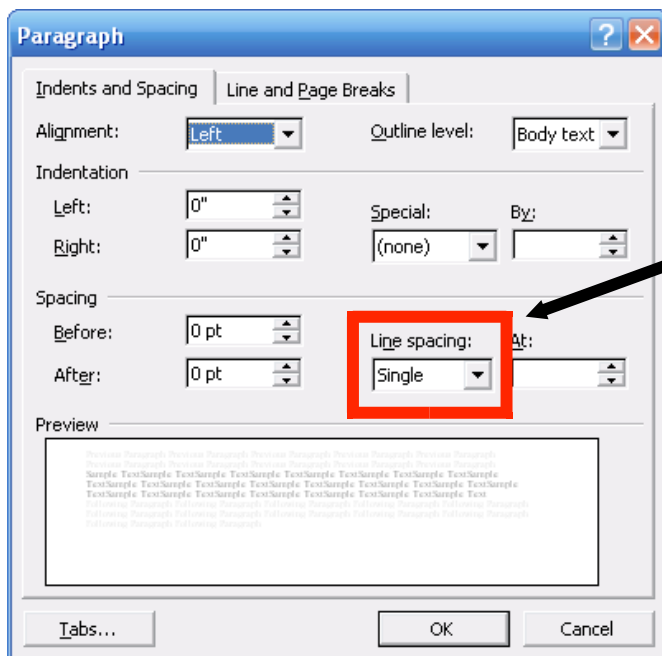
Three paragraphs are below:

There are many reasons for using computers today. Word processing is one area that has demonstrated how powerful computers can be. There are many different names of word processors, and many can be quite complicated. In fact today it is difficult to buy a computer without word processing software included some how. Although there are many different kinds of software, most share the same basic functions, and do not require advanced computer or typing skills to use.

Line Spacing refers to the number of blank spaces between lines of type. The most common line spacings are single-spaced and double-spaced, but the line spacing in a word processor can be set to almost any amount of line spacing. One of the other types of spacing is 1.5, which is in between single and double-spaced.

Creating space in a document affects its appearance and readability. Change from single spacing, the default, to 1.5 spacing or double spacing. Use the preferred method of single spacing for business letters or documents, or use double-spacing for print manuscripts, reports, and school papers.

After typing the paragraphs the students will demonstrate how to change the line spacing. They will go to the format menu and choose paragraph. Each paragraph will need to be changed to each of the spacing formats learned today (single-spaced, 1.5 lines, and double-spaced).



Concluding Activity:

After changing the spacing the students will complete a peer check with the partner next to them. The student will save their work in their folder on the network.

Evaluation:

Students will complete a written homework assignment. They will write one 5-7 sentence paragraph explaining what they learned about line spacing.

Rubric grading is as follows:

Category	4	3	2	1	0
Required Elements	The paragraph includes all required elements as well as additional information.	All required elements are included in the paragraph.	All but 1 of the required elements are included on the paragraph.	Several required elements were missing.	Did not complete the assignment

Post-Assessment

Survey and Questionnaire “What I know about Word Processing”

Circle the letter that best describes how you feel about the sentence.

A=Agree D=Disagree U=Unsure

- | | | | |
|--|---|---|---|
| 1. Components of a document include text and images. | A | D | U |
| ▪ You can name more than one type of images that can be entered onto a document. | A | D | U |
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| 7. Font features include size, color, style, and underline. | A | D | U |
| 8. Name the types of images that can be placed on a document? | | | |

- How do you spell-check your document?

10. Name the keyboard shortcut for each of the following tools.

New _____

Open _____

Save _____

Print _____

Undo _____

Redo _____

Cut _____

Copy _____

Paste _____

11. Name one thing that learned about the program Microsoft Word.

5. Name one thing that you thought was the most fun in learning how to use Microsoft Word.
