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# Education Transfer Plan ABSTRACT

**Directions:**

- 1) Please fill out this form electronically by downloading it from <http://iisime.org> under Summer Fellowships, Fellowship Forms.
- 2) Save As and change the file name to **Abstract\_yourlastname**
- 3) Print and attach to your ETP.
- 4) Acquire mentor signature, retain **ORIGINAL** and submit **COPY** to Peer Coach by 8/12/05.
- 5) Acquire administrator signature on **ORIGINAL** and submit to IISME by 10/3/05 to receive \$300 payment.

**ETP TITLE:**

Excel with Excel

**FELLOW NAME:**

Michael Allen

**FELLOW PRIMARY E-MAIL:**

shagster1124@yahoo.com

**SPONSOR COMPANY:**

Lockheed Martin

**MENTOR NAME:**

Sandra Bennett

**ABSTRACT (50 words or less:)**

The project gives teachers an introduction to the basic features and functions of Excel. Examples of student projects will be shown to illustrate a variety of uses for the software application. Instruction, guidance, and support will be given to teachers on how to create classroom projects using Excel.

**ETP TYPE:** Conventional

**GRADE LEVEL:** Staff Development

**Subject:** Technology **Document Format(s):**  Word doc  PowerPoint  Excel  Other:

If "Other," please describe:

---

Describe how your ETP aligns with NBC or State standard as stated in your proposal:

This project addresses the National Board of Certification standard: Standard VI Multiple Teaching Strategies for Meaningful Learning. Teachers will be introduced to an instructional tool and strategy that engages students and promotes learning in their classrooms. The project addresses three ISTE National Educational Technology Standards: Standard IIIA- facilitate technology-enhanced experiences that address content and student technology standards, Standard IIIC- apply technology to develop students' higher order thinking skills and creativity, and Standard IVA- apply technology in assessing student learning of subject matter using a variety of assessment techniques.

Describe the connection between your ETP and the Summer Fellowship.

My summer fellowship responsibilities were to learn the latest version of Microsoft Office and present the new features at staff development sessions. It is clear that computer skills are used extensively and necessary to complete a variety of tasks in the workplace. Staff needs to be updated on software applications as new versions are introduced. To help teachers prepare students for the workplace in the future, they need to be proficient in software applications and the ability to create technology rich projects.

Checklist for sections contained in ETP:

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Clearly Stated Outcomes & Standards | <input checked="" type="checkbox"/> List of Materials/Resources             | <input checked="" type="checkbox"/> Hard Copy Turned In to Peer Coach |
| <input checked="" type="checkbox"/> Specific Procedure/Plan             | <input checked="" type="checkbox"/> Rubric or plan for evaluating outcomes. | <input checked="" type="checkbox"/> Soft Copy Turned into Peer Coach  |

**I. FELLOW SIGNATURE-- Required Before August 12, 2005**

I, the IISME **Fellow** named above, affirm that the ETP I am submitting is my own work, that I acknowledged sources where appropriate, and that I avoided including any proprietary information of the Sponsor Company. By my submission I am assigning to IISME my entire copyright in the ETP. I understand IISME is simultaneously granting me a license to use the ETP for pedagogical purposes

Signature\_\_\_\_\_

Date

**II. MENTOR SIGNATURE-- Required Before August 12, 2005**

I, the **Mentor** named below [please select one of the following],

- have read the attached ETP, and my comments, if any, appear below.
- have read the attached ETP, and, as outlined in the IISME-Company Fellowship Agreement, have reviewed it on behalf of the Sponsor Company, and have determined that the ETP does not contain any Sponsor-proprietary information. My additional comments, if any, appear below.

Mentor Comments:

Signature\_\_\_\_\_

Date

Printed Name:

**III. ADMINISTRATOR SIGNATURE-- Required Before October 3, 2005, submit to IISME on or before October 3 to be eligible for \$300 grant.**

I, the **Administrator** named below have read the attached ETP and my comments, if any, appear below.

Administrator comments:

Signature\_\_\_\_\_

Date

Printed Name:

## **Abstract**

Teachers will receive an introduction to the basic features and functions of Excel. Examples of student projects will be shown to illustrate a variety of uses for the software application. Instruction, guidance, and support will be given to teachers on how to create classroom projects using Excel. The workshop demonstrates an effective method of integrating technology with content standards.

## **Objectives**

- Teachers will understand the basic functions and features of Excel
- Teachers will participate in an Excel professional development training
- Teachers will create five projects using Excel
- Teachers will complete pre and post surveys regarding their proficiency in Excel
- Teachers will evaluate the training, indicate if they will implement one or more of the projects learned in class, and identify if they would like additional help.

## **Description**

“Excel with Excel” has been designed to introduce the basic features and functions of Excel. Teachers will be taught how to use the application by creating five interactive learning activities. Teachers will also be given a variety of internet resources and view a variety of student and teacher created projects using Excel.

The workshop has been divided into five modules. Each module contains a brief introduction, list of objectives, and step by step instructions on how to create an Excel based activity. The first module is a basic introduction to Excel and is designed for those that have minimal or no experience using the application. The remaining modules provide instruction and practice of new skills and each result in a finished project, an interactive learning activity. These activities can then be used in the classroom and as templates to create similar one.

The most effective method for the delivery of content outlined would be one or two staff development training sessions. Depending on the grade level and ability of their students, teachers have a variety of options after leaving the workshop. Some teachers, especially those in the lower grades, can use what they learn to create similar projects for their students to complete. Teachers of older students can actually teach their students how to use Excel and help them create their own projects.

At the end of the training workshop teachers will have learned and practiced a variety of skills in Excel. Teachers will receive printed instructions for each module completed. These can be used as a reference when designing their own interactive Excel based learning activities that are specific to the needs of their individual classrooms. In addition, the instructor of the workshop will be available throughout the year to assist teachers in the design, planning, and/or implementation of their classroom projects.

## **Standards**

This project addresses the National Board of Certification standard: Standard VI Multiple Teaching Strategies for Meaningful Learning. The project also addresses three ISTE National Educational Technology Standards: Standard IIIA- facilitate technology-enhanced experiences that address content and student technology standards, Standard IIIC- apply technology to develop students' higher order thinking skills and creativity, and Standard IVA- apply technology in assessing student learning of subject matter using a variety of assessment techniques.

Teachers will be introduced to an instructional tool and strategy that engages students and promotes learning in their classrooms. The projects teachers create as a result of the workshop will give them the skills to integrate content standards with technology. The Excel based projects teachers choose to implement in their own classroom, will allow their students to be creative, learn about design and learn required on content. Projects created Excel can be used as an alternative to assess the learning progress of students.

## **Materials**

- Computers with the Microsoft Office software application

## **Connections**

During my fellowship I was responsible for learning Microsoft Office 2003 and present its new features at staff training sessions. It is clear that computer skills are used extensively and necessary to complete a variety of tasks in the workplace. Staff needs to be updated on software applications as new versions are introduced. To help teachers prepare students for the workplace in the future, they need to be proficient in software applications and the ability to create technology rich projects.

## **Resources**

This website is a great resource for learning, using, and implementing Excel projects in the classroom. It has extensive lists of tutorials, project ideas, and links to other useful websites:

[http://www.internet4classrooms.com/on-line\\_excel.htm](http://www.internet4classrooms.com/on-line_excel.htm)

The learning modules outlined here have been adapted from the following website:

[http://www.education-world.com/a\\_tech/archives/techtutorials.shtml](http://www.education-world.com/a_tech/archives/techtutorials.shtml)

## **Procedure**

- Ask teachers to complete “Pre-Workshop: Staff Excel Survey” form
- Plan, schedule, and invite teachers to Excel workshop
- Conduct Excel workshop
- Ask teachers to complete “Post-Workshop: Staff Excel Survey” and “Workshop Evaluation” forms
- Provide assistance as needed throughout the year to those teachers who choose to implement an Excel based project in their classroom

## MODULE 1- INTRODUCTION

Excel is a software program that allows users to enter and manipulate data.

### Objectives:

- Open a new Excel spreadsheet
- Enter data
- Change cell size
- Sort data
- Format borders
- Save and print

### Open a new Excel spreadsheet

- Click the **Excel icon** on the **Dock** or
- Double click the **hard drive icon** on the **Desktop/Applications/Excel**

### Explain the following:

Spreadsheet- basic document in Excel

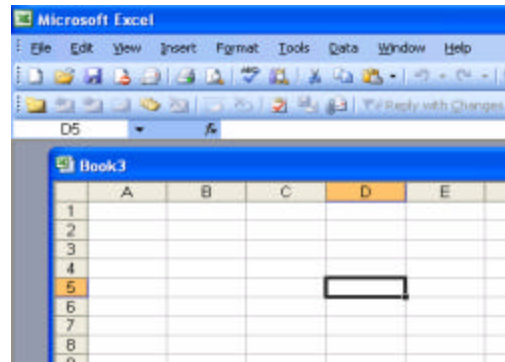
Columns- identified by letters:

(A, B, C, D....)

Rows- identified by numbers:

(1, 2, 3, 4....)

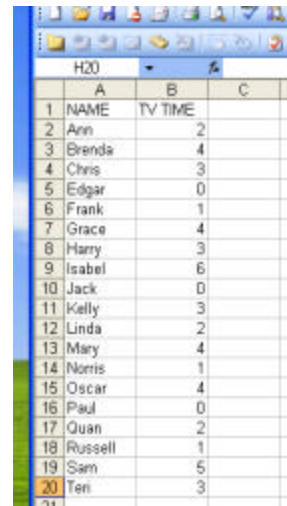
Cells- rectangular field where data is entered and each one is identified by a letter and number (A1, B4, C23.....)



### Enter Data

Once students understand basic spreadsheet terms and layout, they are ready to enter data into their spreadsheets.

1. In cell A1, type **NAMES**
2. Continue down column A (A2, A3, A4....) typing one student's name in each cell until all names are listed.
3. In cell B1, type **TV TIME**
4. Continue down column B (B2, B3, B4....) typing the number of hours per day each student watches TV.
5. Click **File/Save** to save work

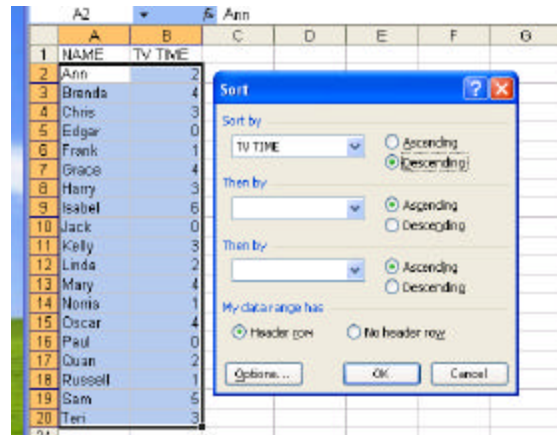
A screenshot of the Microsoft Excel application window showing a spreadsheet with data. The title bar reads "Microsoft Excel". The menu bar includes "File", "Edit", "View", "Insert", "Format", "Tools", "Data", "Window", and "Help". The toolbar contains various icons for file operations and editing. The spreadsheet area shows a grid with columns labeled A through C and rows numbered 1 through 21. Column A contains names and column B contains TV time. Cell H20 is selected.

	A	B	C
1	NAME	TV TIME	
2	Ann	2	
3	Brenda	4	
4	Chris	3	
5	Edgar	0	
6	Frank	1	
7	Grace	4	
8	Harry	3	
9	Isabel	6	
10	Jack	0	
11	Kelly	3	
12	Linda	2	
13	Mary	4	
14	Norris	1	
15	Oscar	4	
16	Paul	0	
17	Quan	2	
18	Russell	1	
19	Sam	6	
20	Teri	3	
21			

## Sort Data

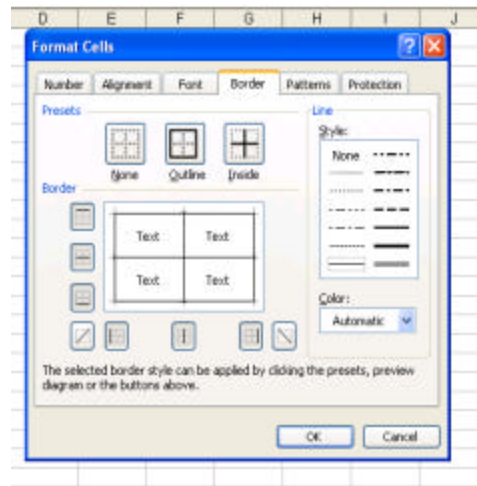
It is sometimes necessary to arrange data in a particular order. Tell students that they are going to arrange their TV viewing times in order, from most hours to the fewest hours.

1. Highlight all the cells with data in them, click cell A2, hold down the mouse button, drag the cursor down and to right until all the cells are included
2. In the menu bar go to **Data/Sort**
3. In the menu select TV Time
4. Select **Descending**
5. Click **OK**
6. **Save** your work



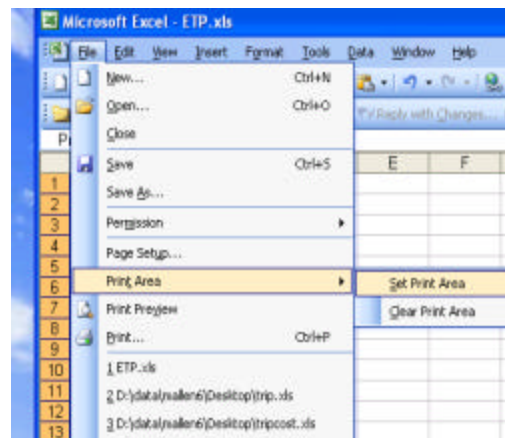
## Create a Border

1. Highlight all the cells with text or numbers in them, click cell A1, hold down the mouse button, drag the cursor down and to right until all the cells are included
2. Click **Format/Cells** then click the **Border Tab**
3. Click the boxes above **Outline** and **Inside**
4. Hit **OK**
5. **Save** your work



## Print

1. Highlight all the cells with texts or numbers in them, click cell A1, hold down the mouse button, drag the cursor down and to right until all the cells are included
2. Click **File/Print Area/Set Print Area**
3. Click **Print**



## MODULE 2- CHARTS AND GRAPHS

Charts and graphs are used to show relationships between numbers. Use the table of data created in the introduction.

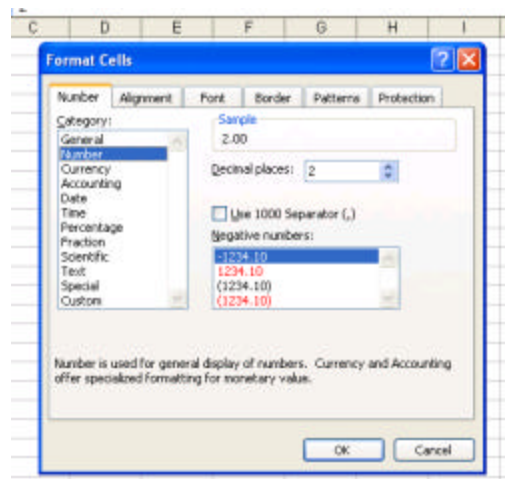
### Objectives:

- Format numbers
- Add and delete rows in a spreadsheet
- Align data
- Create a chart or graph

### Format Numbers

Numbers have to be formatted correctly depending on the type being displayed.

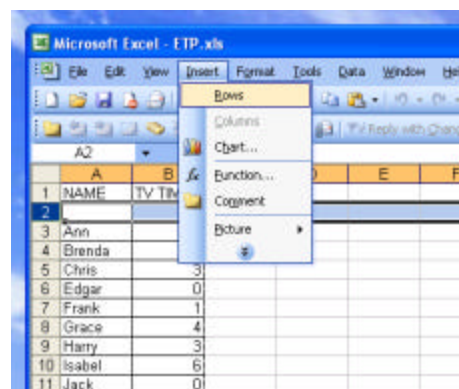
1. Highlight all the cells in column B containing a number
2. Click **Format/Cells/Number**
3. Click **Number** in the Category window
4. Choose **2** in the **Decimal Places** window
5. Click **OK**



### Add, Delete, or Align Data

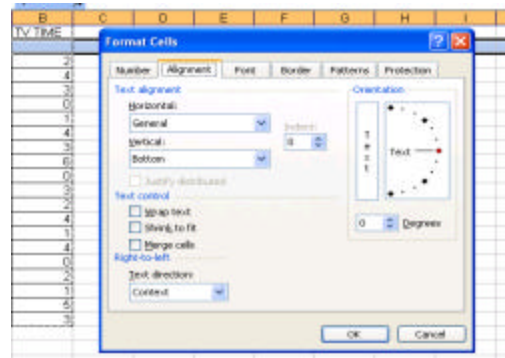
Columns or rows can be added or deleted from a spreadsheet at any time.

1. Click Row 2 to left of the first name to highlight the entire second row
2. Click **Insert/Row**
3. Type **“in the name of the instructor”** and **“the number of hours of TV watched”**
4. To delete a column or row, click the number of the row or letter of the column and then click **Edit/Delete**



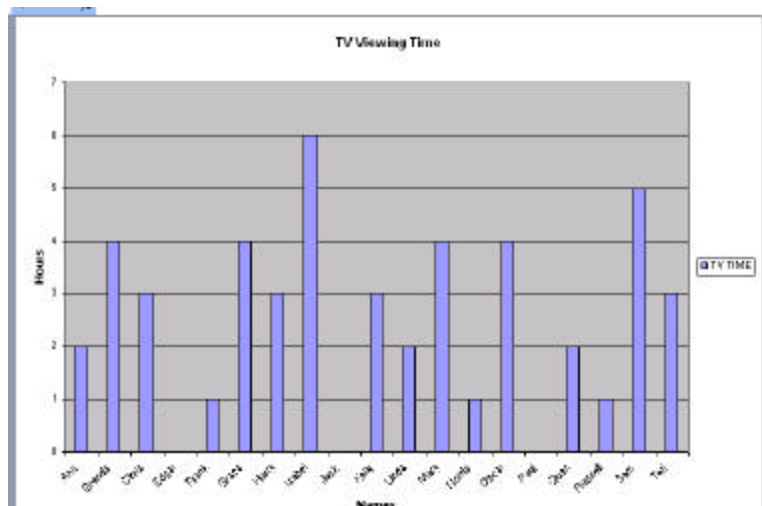
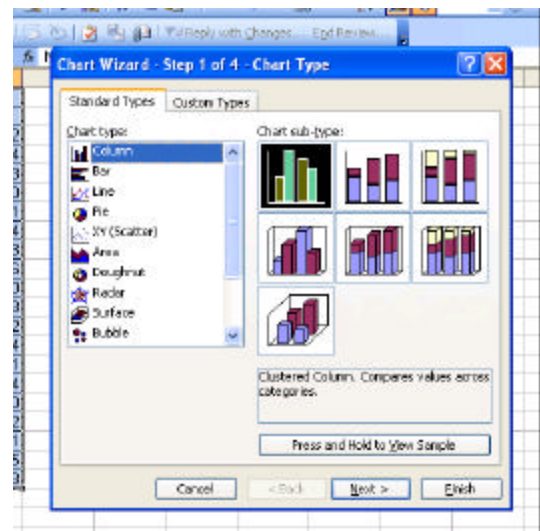
## Numerical data in a spreadsheet is automatically aligned to the right of a cell

1. To realign the data highlight all the cells in column B that contain numbers
2. Click **Format/Cells/Alignment** and then under the **Horizontal** window choose **Center**



## Create a Chart or Graph

1. Highlight all the cells with text or numbers in them, click cell A1, hold down the mouse button, drag the cursor down and to right until all the cells are included
2. Go to **Insert/Chart** or click the **Chart Button**
3. Chart Wizard
  - Step 1: Choose **Column** as the Chart type
  - Step 2: Click **Next**
  - Step 3: Type **TV Viewing** as the title  
**Names** as the Category X axis  
**Hours** as the Value Y axis  
Click **Next**
  - Step 4: Click as **New Sheet**
  - Step 5: Click **Finish**
4. **Save** your work



## MODULE 3- TESSELLATIONS

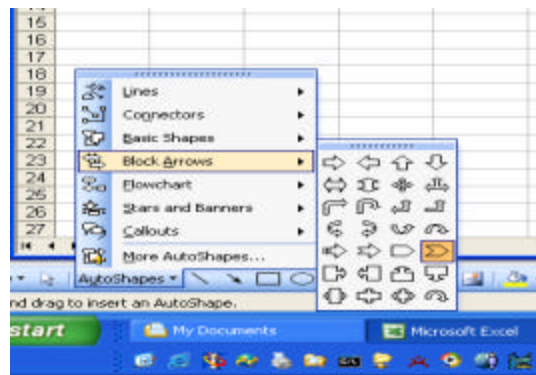
Tessellations are patterns that have a single repeated shape arranged so that there is no overlapping or space between shapes.

### Objectives:

- Modify page orientation
- Use Drawing Toolbar to create and color shapes
- Copy and paste shapes
- Manipulate shapes on a worksheet to create a pattern

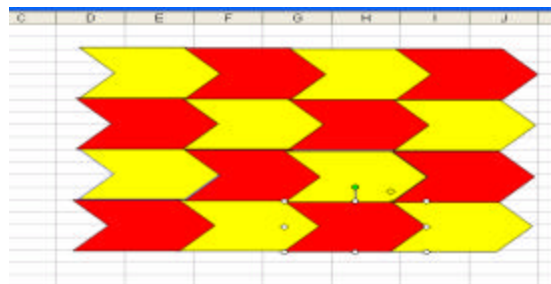
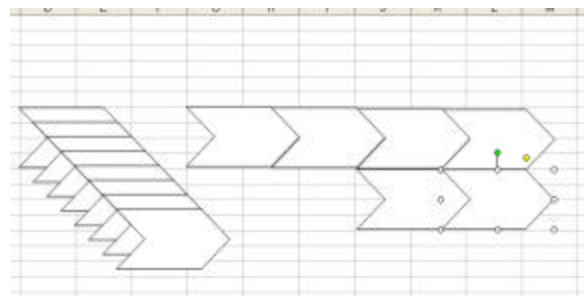
### The Basic Polygon

1. Open Microsoft Excel
2. Click **View/Toolbars/Drawing**
3. Click **File/Page Setup/Landscape/OK**
4. On the **Drawing Toolbar**, find the **Auto Shapes** button/click **Basic Arrows/choose Chevron**
5. Draw a chevron on the spreadsheet, make it about two columns wide and four rows tall
6. **Save** your Work



### The Tessellation

1. Click **Edit/Copy**
2. Click **Edit/Paste** 15 times
3. Arrange the chevrons so they are row upon row and end to end with no spaces in between
4. Use the **Paint Icon** on the **Drawing toolbar** to color the polygons. Alternate with two colors
5. **Save** your work



## MODULE 4- INTERACTIVE CROSSWORD PUZZLES

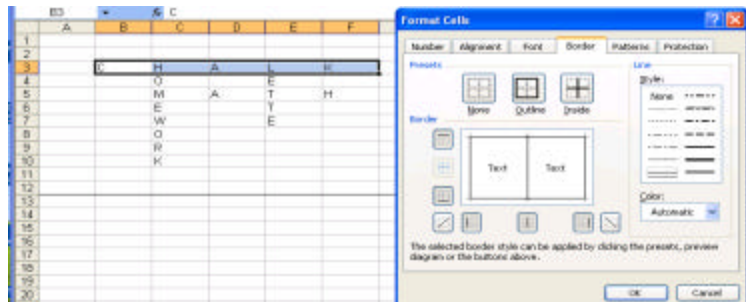
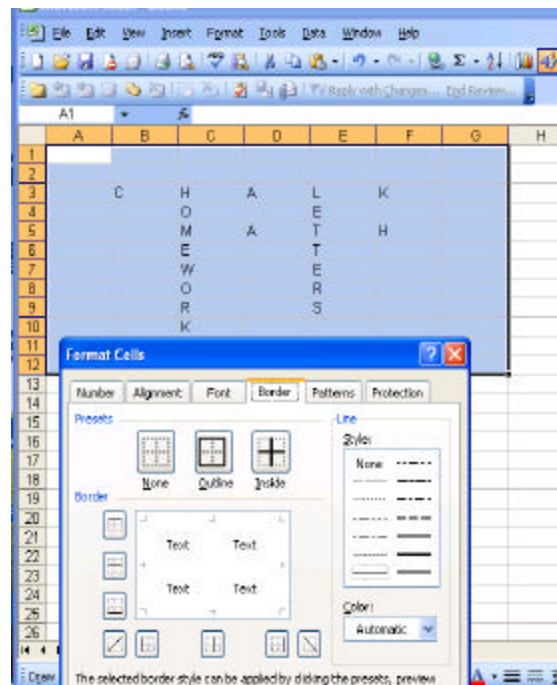
Using Excel creates a crossword puzzle that is interactive. As students type in their responses to a clue they are given immediate response to whether they answered correctly or not.

### Objectives:

- Create borders
- Color cells
- Alignment of data in cells
- Modify column width and row height
- Add cell comments
- Add conditional formatting for cells
- Create a template

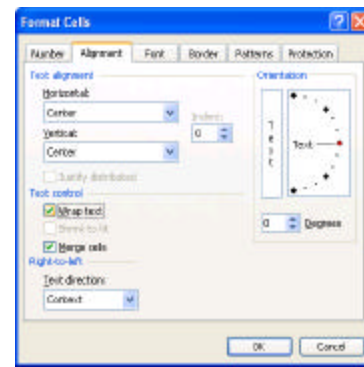
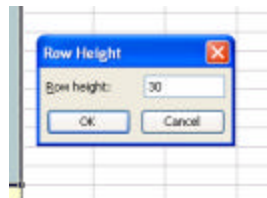
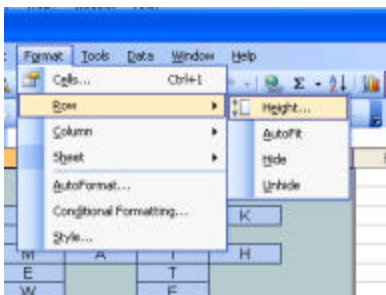
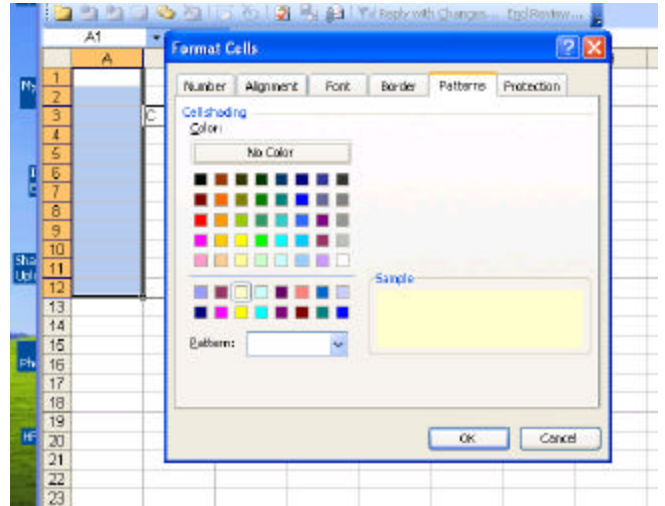
### Typing the Basic Puzzle

1. **Open** a worksheet in Excel
2. In cells B3 through F3 type the word **CHALK** horizontally (one letter per cell)
3. In cells C3 through C10 type the word **HOMEWORK** vertically
4. In cells C5 through F5 type the word **MATH**
5. In cells E3 through E9 type the word **LETTERS**
6. **Save** your work
7. Highlight all the cells from A1 to G12 and click **Format/Cells/Border/Outline/OK**
8. Highlight each word and click **Format/Cells/Border/Outline** and **Inside/OK**
9. **Save** your work



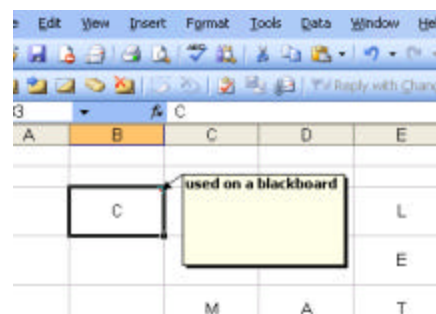
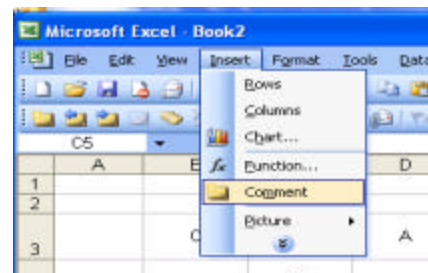
## Finishing the Basic Puzzle

1. Highlight a group of cells in the puzzle that do not have letters in them, for example: A1 through A12
2. Choose **Format/Cells/Pattern/yellow/OK**
3. Continue to color all the empty cells (Do not color cells with letters in them)
4. Highlight all cells from A1 to G12
5. Click **Format/Cells/TextAlignment/Horizontal** and **Vertical** choose **Center/OK**
6. Click **Format/Row/Height/type 30/OK**
7. Click **Format/Column/Width/type 10/OK**
8. **Save** your work



## Adding the Puzzle Clues

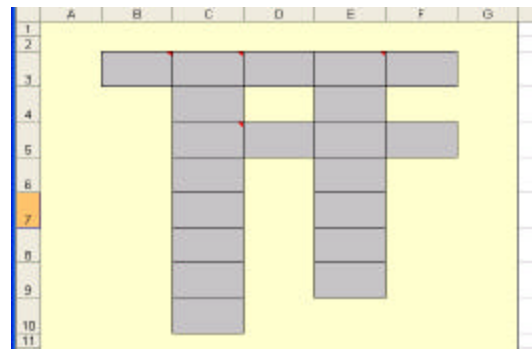
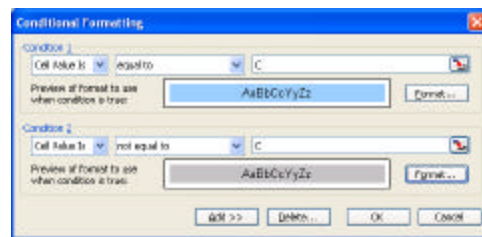
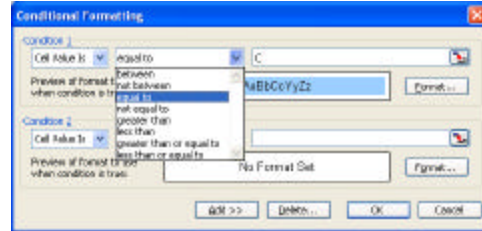
1. Click cell 3B, click **Insert/Comment** and in the sticky note that appears, erase what appears and type the clue **used on a blackboard**
2. Click cell 3C, click **Insert/Comment**, erase what appears and type **school work you do in the evening**
3. Click cell 5C, click **Insert/Comment**, erase what appears and type **subject that teaches you about numbers and shapes**
4. Click cell 3E, click **Insert/Comment**, erase what appears and type **there are 26 of these in the alphabet**
5. **Save** your work



## Making it Interactive

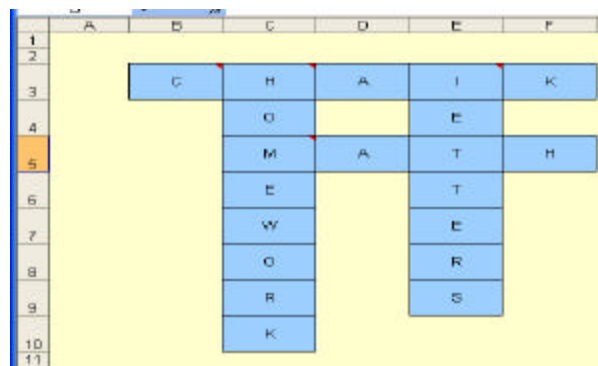
A condition in Excel tells the program that if a certain value is typed, the formatting will change. Conditions must be set to let students know whether their answers are correct or not. To let students know when a correct letter is typed into a box it will turn blue.

1. Click cell B3
2. Click **Format/Conditional Formatting**
3. Click **Add**, There are now two menus, Condition 1 and Condition 2
4. For Condition 1: In the drop down menu that says “between”, select “**equal to**” and type the letter **C** in the empty box, click **Format/Patterns/choose light blue/OK**
5. For Condition 2: In the drop down menu that says “between”, select “**not equal to**”, and type the letter **C** in the empty box, click **Format/Patterns/choose grey/OK**
6. Click **OK** again
7. Repeat steps 1-5 for every letter in the puzzle
8. When Conditional formatting is done, erase all the text from the puzzle. The puzzle should be blank with grey boxes and red triangles in the corner of the clue cells
9. **Save** your work



## Creating a Template

1. Click **File/Save as/Format/change the type to Template**
2. Notice the extension is not “.xlt” not “.xls”



## MODULE 5- CALCULATION FORMS

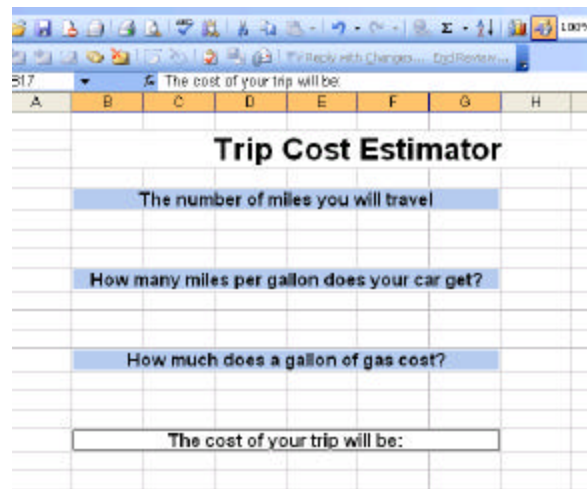
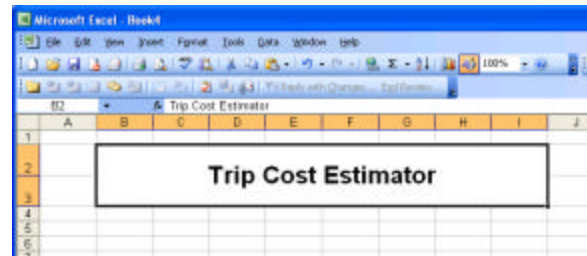
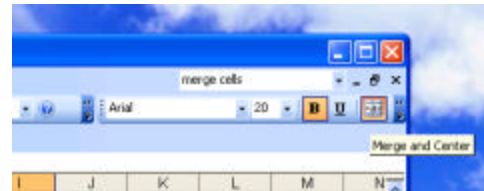
Formulas can be created to make calculations of data from several cells.

### Objectives:

- Merge Cells
- Select noncontiguous cells
- Insert and modify graphics
- Create functions to calculate data
- Add protection to a worksheet
- Lock and unlock cells

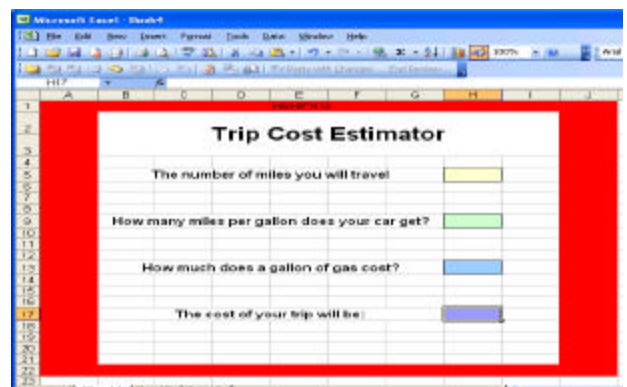
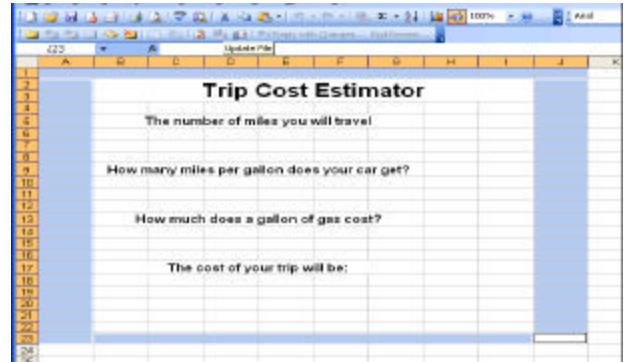
### Adding and Formatting Text

1. Open an excel spreadsheet
2. Highlight cells B2 through I3 and in the **Formatting Toolbar** choose **Bold** for font, **20** for size, and click the **Merge and Center Button**
3. Click **Format/Cells/Alignment/** choose **Center** for both **Vertical** and **Horizontal/OK**
4. Type **Trip Cost Estimator**
5. Highlight cells B5 through G5, press the control key and highlight B9 through G9, B13 through G13 and B17 through G17
6. In the **Formatting Toolbar** click **12** for font size, **B** for bold and then the **Merge and Center Button**
7. In cells B5 through G5 type **The number of miles will you travel**
8. In cells B9 through G9 type **How many miles of gallons does your car get?**
9. In cells B13 through G13 type **How much does a gallon of gas cost?**
10. In cells B17 through G17 type **The cost of your trip will be:**
11. **Save** your work



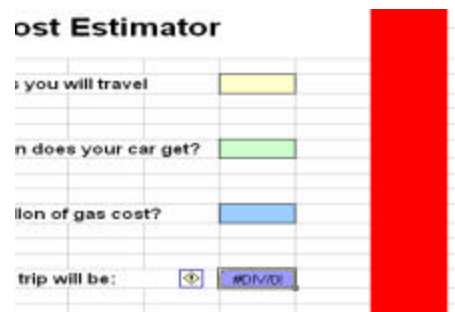
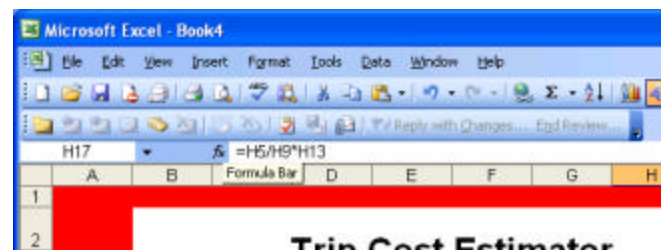
## Adding Color

1. Highlight cells A1 through J1, press the Control Key and then highlight cells A22 through J22, A2 through A21, and J2 through J21
2. Click **Format/Cells/Patterns/choose red/OK**
3. Highlight cell H5 click **Format/Cells/Patterns/choose light yellow/OK**
4. Highlight cell H9 click **Format/Cells/Patterns/choose light green/OK**
5. Highlight cell H13 click **Format/Cells/Patterns/choose light blue/OK**
6. Highlight cell H17 click **Format/Cells/Patterns/choose light purple/OK**
7. Highlight cell H5, press the Control key and then highlight cells H9, H13, and H17
8. Click **Format/Cells/Border/click Outline/OK**
9. **Save** your work



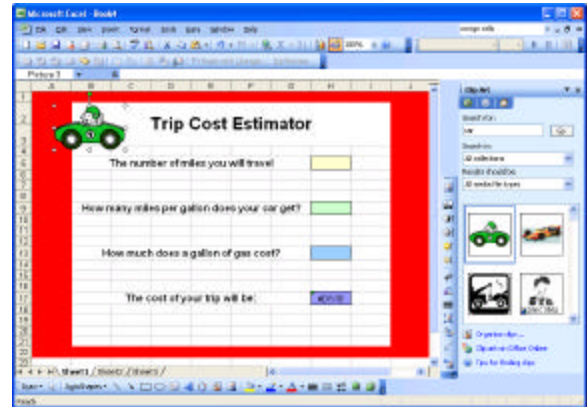
## Adding Functions

1. Highlight cell H17 and place your cursor in the long blank space at the top of the worksheet next to the symbol  $fx$  (in the small box H17 will appear)
2. Type **=H5/H19\*H13** (#DIV/0! will appear but ignore it)
3. Highlight cell H13 click **Format/Cells/Number/choose currency and 2 decimal places/OK**
4. **Save** your work



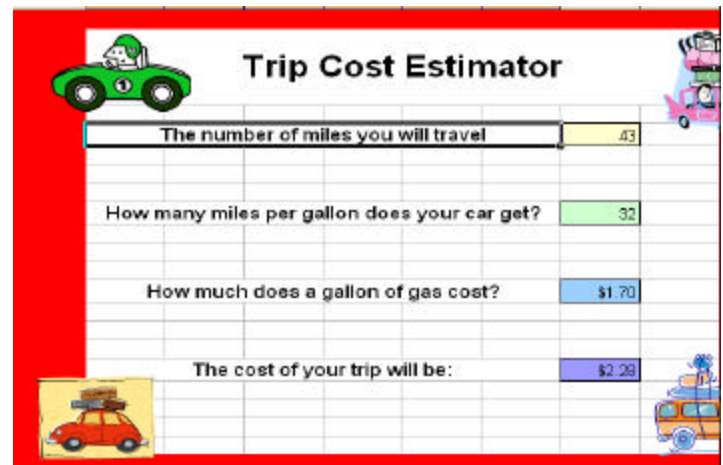
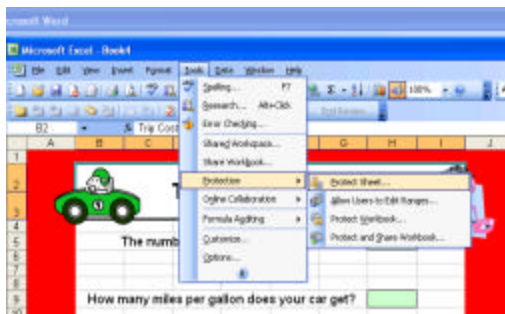
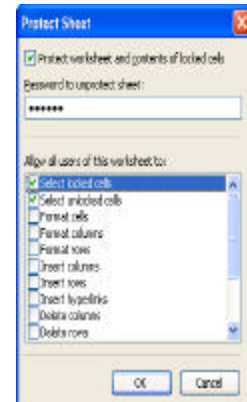
## Inserting and Modifying Graphics

1. Click **Insert/Picture/Clip art/Search** for “car”/OK
2. Choose and click one picture you like, it will appear on your worksheet
3. Drag the image to the top left hand corner of the worksheet
4. Grab a corner of the image to resize it so it doesn't cover any text
5. Repeat the steps above to insert three more images and place one in each of the three corners
6. **Save** your work



## Adding Protection

1. Highlight cell H5, press the control key and highlight cells H9 and H13
2. Click **Format/Cells/Protection/** uncheck the **Locked box/OK**
3. Click **Tools/Protection/Protect Sheet/** type in **school** for a password/OK



Name \_\_\_\_\_

(circle one)  
pre-workshop    post-workshop

## Staff Excel Survey

Please identify your overall experience with Excel  
(circle one)

No Experience      Beginner      Intermediate      Advanced

Please rate your ability in each of the following skills:  
(check one box for each skill)

Skill	I can do it	I think I know how	I have no idea
Open a new spreadsheet			
Save and print			
Modify Page Orientation			
Enter data			
Align data			
Sort data			
Format numbers			
Change cell size			
Merge cells			
Color cells			
Select non-contiguous cells			
Add cell comments			
Add conditional formatting			
Create borders			
Add and delete rows in a spreadsheet			
Modify column width and row height			
Create and color shapes			
Copy and paste shapes			
Manipulate shapes to form a pattern			
Insert and modify graphics			
Create a chart or graph			
Create functions			
Add protection to a worksheet			
Lock and unlock cells			
Create a template			

Please indicate your interest in attending an Excel Workshop  
(circle one)

Yes, I am interested

Maybe, depends when it is

No, I am not interested

Name \_\_\_\_\_

## Evaluation

### Excel Staff Development Training Workshop

Please rate your satisfaction with the training  
(use this scale)

- 1- Very Dissatisfied
- 2-Dissatisfied
- 3-Neither Satisfied or Dissatisfied
- 4-Satisfied
- 5-Very Satisfied

Usefulness of training	1-----2-----3-----4-----5
Format of training	1-----2-----3-----4-----5
Content of training	1-----2-----3-----4-----5
Objectives outlined	1-----2-----3-----4-----5
Topics covered	1-----2-----3-----4-----5
Speaker's skills	1-----2-----3-----4-----5
Overall rating	1-----2-----3-----4-----5

General comments:

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Please answer the questions below:  
(circle one for each question)

Are you going to create an Excel based project for your students to complete?

yes                      maybe                      no

Are you going to teach your students how to create their own projects using Excel?

yes                      maybe                      no

Would you like additional help and support to complete a project using Excel?

yes                      maybe                      no