

# Real Estate

## Integrating Math, Technology and English

### Objectives for Student Activities

- Contact local real estate agent to be a guest speaker (may invite all classes involved in the project)
- Develop a logo for the real estate company (include a graphic)
- Provide a picture of homes
- Develop a multiple listing form
- Create a newspaper advertisement and calculate the cost
- Calculate square footage of individual homes and determine fair market value
- Determine the expense for the buyer to replace the floor covering in the living area
- Calculate how many rolls of wallpaper would be needed to cover the walls in the master bedroom (cost may be calculated)
- Calculate the number of gallons of paint needed to paint the remaining bedroom(s) (cost may be calculated)
- Produce a presentation to advertise the homes listed by the real estate company
- Create a newspaper advertisement and calculate the cost of having the ad run in the local newspaper
- Create a web page for the real estate company
- Produce a television commercial advertising the real estate company
- Design a T-shirt for real estate company

## Resources

### Printed Sources

- Blanc, "Learning Microsoft Office 97", Microsoft Access 97, Lesson 1, Create a Database Form; Lesson 2, Edit and Print a Database; Lesson 3, Search and Sort a Database; Lesson 4, Queries.
- Blanc, "Learning Microsoft Office 97", Microsoft PowerPoint 97, Lesson 1, Create, Save, and Print a Presentation; Lesson 2, Enhance Slides; Work with Text and Objects; Lesson 3, Work with Slide Shows.
- Blanc, "Learning Microsoft Office 97", Microsoft Word 97, Lesson 8, Clip Art and Templates.
- Shelly Cashman Series, "Netscape Composer", International Thompson Publishing Company.

### Websites

<http://www.homesekers.com> – examples of real estate listings and web pages may be viewed

<http://www.century21.com> – examples of real estate listings and web pages may be viewed

<http://www.realtor.com> – examples of real estate listings and web pages may be viewed

## Materials

- Computer with desktop publishing software
- Printer (Color if possible)
- Scanner
- Card stock paper to print the cover for the multiple listing book
- Spiral binder (optional)
- Digital camera (optional)
- Disposable camera (optional)
- Video camera (optional)
- Newspaper layout paper
- T-shirt transfer iron-on
- T-shirt (Student provides)

## Student Activity 1: Guest Speaker

### Contact a local real estate agent to be a guest speaker.

It is beneficial if all students (Math, Technology and English) involved in the project can be invited to hear the speaker. If it is not possible for all the classes to meet during one scheduled class period, the speaker may be taped to show the other classes.

### Ask the real estate agent to cover the following subjects:

1. Average turnover rate of homes in the local area;
2. What determines the fair market value of homes;
3. The average sales price per square footage of homes;
4. Educational requirements to become a real estate agent;
5. What skills are used by a real estate agent on a daily basis;
6. Discuss seller/buyer commissions;
7. Explain how the multiple listing form is used in the industry.

## Student Activity 2: Development of Logo

- The technology students will be divided into groups to form various real estate companies. The size of the groups will be determined by the instructor, based on computer availability, size of classes, etc.
- The students will develop a company logo that can be used on all printed materials. The logo should include a graphic, name of company, address, phone number and web address.
- Letterhead stationary will be designed for the company using the logo. Individual business cards for the students will be designed and they should be personalized with student's individual names and company logo.

## Student Activity 3: Picture for Multiple Listing Book

All students will bring a picture of their individual homes. If the student lives in an apartment, duplex or housing development, they can bring a picture of their individual unit. (If a student chooses to use a different home, he/she must have access to the home to measure

for square footage.) The picture can be one that has been made within the last year or they can use the disposable camera that can be provided by the instructor. Some students may have access to a digital camera to take their picture. If the picture is brought in hard copy format the pictures can be scanned to be included in the multiple listing book. If a scanner is not available the students may use their original picture or make a photocopy to be used in the book.

### Student Activity 4: Develop Multiple Listing Form and Database

- The technology students will develop a multiple listing page for the real estate book. This page may be developed from examples presented by the guest speaker or designed to meet the individual real estate company.
- Students will develop a database of all the homes listed for their agency. The database will be used to develop the multiple listing pages. The database can also be used to query (field) information needed for individual customer preference. (Such as a family looking for a three bedroom/two bath home.)

### Student Activity 5: Creating a Newspaper Advertisement and Cost

- Students will create a newspaper advertisement for their real estate agency. The advertisement should include a brief description of the home, a picture and the logo for the company. Newspaper layout copy pages may be obtained from the local newspaper. The students will use the layout paper to determine the column size. Using the following form, the students will determine the cost of the advertisement.

1. Determine number of columns used \_\_\_\_\_
2. Determine inches used for ad \_\_\_\_\_
3. Multiply number of columns by inches used to find total inches for ad  
\_\_\_\_\_
4. Multiply total inches used in ad by \$11.75 (represents cost of 1 inch of ad space)  

$$\begin{array}{r} \text{_____} \\ \times \$11.75 \\ \hline \end{array} = \text{_____}$$

(Total inches) (Cost of Ad)
5. If color is used in ad layout, add \$100.00 for each additional color to the cost of the ad. (Black is not a color)

Cost of ad	\$ _____
+\$100.00 (Per each color used)	\$ _____
Total Ad Cost	\$ _____

## **Student Activity 6: Calculating Square Footage and Fair Market Value of Home**

- The math instructor will review with the students how to calculate the area of a rectangle. Students will be responsible for calculating the total square footage of their home. The math students will work with the technology students to assist the technology students in determining the square footage of their homes. This facilitates the integration of the math curriculum with the technology curriculum.
- To determine the square footage the student will have to find the product of the length and width of their home. The students will also need to be advised to deduct the square footage of non-heated areas, such as garage, porch, etc.
- The fair market of the home will be determined by multiplying the square footage by the average price per square foot in your town. (This information should be included in the discussion by the guest speaker.)

## **Student Activity 7: Calculating Carpet Cost**

The buyer would like to know the cost of replacing the carpet in the living area of his/her new home. Carpet is sold by the square yard.

**To determine the cost of replacing the carpet the student will:**

1. Measure the dimensions (Length X Width) of the room in yards and multiply to obtain the square yardage needed to carpet the room. The cost of carpeting the room can be determined by multiplying the square yardage needed by the cost per square yard of carpet. (Price of the carpet can be determined by comparing cost in local store or researching carpet cost on the internet.)

**OR**

2. Measure the dimensions of the room in feet and multiply to obtain the square feet needed to carpet the room. Because carpet is sold by the square yard, the student must convert the square feet to square yards to determine the price. (Take the square footage needed and divide by 9.) Students will determine the cost of carpeting the living area.

## **Enrichment Problem 1: Determining the Cost of Wallpapering the Master Bedroom**

- Determine the square footage of the walls in the master bedroom. (Length X Width)  
Note: If you have windows or doors in the room, they will not be wallpapered.
- Students will need to visit a wallpaper store and select the design that would be used to cover the master bedroom walls.
- The pattern match of wallpaper is very important. The student will have to determine the amount of waste that would be incurred due to matching the patterns in the wallpaper.
- Remember, that wallpaper is sold in rolls and that paper will be wasted in this project.

- Using the price of the wallpaper the student chose, determine the price of papering the walls in the master bedroom.

### **Student Activity 8: Cost of Painting Bedrooms**

Determine the square footage of the remaining bedroom(s) walls. Using the guide that is located on the label of paint, determine how many gallons of paint would be needed if the remaining bedroom(s) were painted the same color. The cost of painting the walls must also be determined. This can be done by visiting a local paint store, selecting the paint, determining the gallons needed and multiply the cost per gallon times the number of gallons. Research can also be done on the Internet to find the cost of paint.

### **Enrichment Activity 2: Cost of Paint and Other Supplies**

Have students research (visit a paint store, view home repair video, research on the internet) the cost of paint and other supplies needed to paint the bedroom walls.

### **Student Activity 9: Computer Presentation**

The technology students will design a presentation for their respective real estate company to advertise their company and the homes they have listed. Sound may be included in the presentation if possible. With the use of an AverKey or other device, the presentation can be made into a videotape. The script for the tape can be written by the technology students or by an English class.

### **Student Activity 10: Publishing Multiple Listing Book**

The technology students will design a cover for their respective real estate company. A graphic with the name of the company and logo will be included on the cover. The front and back cover of the multiple listing book should be printed in color and on card stock paper if possible.

The pictures of the houses used will be included on the individual multiple listing pages. Pages for the multiple listing book will be printed using the multiple listing form and database developed. The information on homes is assembled in the multiple listing book by ascending values. The book can be printed in the correct order format by using the ascending query in the database.

The students will determine the best method for assembling the book to be used by their respective company.

### **Student Activity 11: Creating a Web Page**

Technology students will design a web page for their respective real estate agencies. The web page must have at least five links to other web pages. One would be to the community, a financial institution, and other relevant sites. A link must be included to go back to the home page on each additional page included.

## **Student Activity 12: Television Commercial**

Each company will produce a television commercial for their company. The commercial should be written and practiced in advance of the taping. A student example may be viewed below.

## **Student Activity 13: Design a T-shirt**

Each student will design a t-shirt for the company. The shirt can be designed on the computer and by using reverse printing can be printed on t-shirt transfer iron-on paper and ironed on the shirt. (White or grey shirts work best)

## **Student Activity 13: Display Projects**

Have students print copies of all projects that have been completed. Each company would have a designated area in which to display all printed materials. (Display in hall for open house)

# **Evaluation:**

## **Student Activity 1: Guest Speaker**

A guest speaker evaluation form may be developed for the students to complete while listening to the guest speaker.

### **Concepts that may be considered when evaluating are:**

1. Name of guest speaker
2. Company represented
3. Average turnover rate of homes in the local area.
4. What determines the fair market value of homes
5. The average sales price per square footage of homes
6. Educational requirements to become a real estate agent
7. What skills are used by a real estate agent on a daily basis
8. What are commissions (listing agent, selling agent)
9. What is a multiple listing book

Have space provided for students to write questions during the guest speaker's presentation. Bonus points could be added to the student's grades for relevant questions asked the speaker.

## **Student Activity 2: Development of Logo**

### **Concepts that may be considered when evaluating are:**

1. Correct margins
2. Correct vertical placement (2" from the top of the page)
3. Correct logo (have logo (graphics), name of company, address, and telephone number)
4. Typographical/grammatically correct

## **Student Activity 4: Develop Multiple Listing form and Database**

**Concepts that may be considered when evaluating are:**

1. Copy of the home is included
2. Table is included
3. Typographical/grammatically correct

## **Student Activity 5: Creating a Newspaper Advertisement and Cost**

**Concepts that may be considered when evaluating are:**

1. Description of the home is included
2. Logo of the company is included
3. Cost of the advertisement is correctly calculated
4. Typographical/grammatically correct

## **Student Activity 6: Calculating Square footage and Fair market Value of Home**

**Concepts that may be considered when evaluating calculating square footage of the home are:**

1. Use of the correct formula for calculating area
2. Accuracy of measurements
3. Deduction of non-heated areas
4. Total area of house
5. Use of proper labels associated with square footage

**Concepts that may be considered when evaluating the fair market value of the home are:**

1. Use of the correct formula
2. Use of correct average price per square footage (given by the guest speaker)
3. Use of proper labels associated with square footage
4. Fair market value figured correctly

## **Student Activity 7: Calculating Carpet Cost**

**Concepts that may be considered when evaluating are:**

1. Use of the correct formula for calculation of how much carpet will be needed
2. Use of proper labels associated with square footage
3. Conversion of square feet (room) to square yards (how carpet is sold)
4. Use of proper labels associated with square yardage
5. Final cost of carpeting the living area

## **Enrichment Problem 1: Determining the Cost of Wallpapering the Master Bedroom**

**Concepts that may be considered when evaluating are:**

1. Use of correct formula for calculating square footage of each wall
2. Use of proper labels associated with square footage
3. Evidence of the removal of areas that will not be wallpapered (windows, doors, etc.)

4. Consideration of matched patterns and waste
5. Final result of papering the master bedroom

### **Student Activity 8: Cost of Painting Bedrooms**

**Concepts that may be considered when evaluating are:**

1. Use of correct formula for calculating correct area of walls
2. Use of proper labels associated with square footage
3. Number of gallons of paint needed
4. Total cost for paint.

### **Enrichment Activity 2: Cost of paint and Other Supplies**

**Concepts that may be considered when evaluating are:**

1. Copies of three price list of paint and other supplies
2. Calculations showing the cost of all supplies to complete the job

### **Student Activity 9: Computer Presentation**

**Concepts that may be considered when evaluating are:**

1. Title page slide
2. Sound included
3. Animations included
4. Transitions included
5. Graphics included
6. Bulleted items

### **Student Activity 10: Publishing Multiple Listing Book**

**Concepts that may be considered when evaluating are:**

1. Cover
2. Graphic included
3. Logo included
4. Copies of all multiple listing pages included
5. Correct order of homes listed (ascending prices)
6. Bound

### **Student Activity 11: Creating a Web page**

**Concepts that may be considered when evaluating are:**

1. Home page
2. Three links
3. Links back to home page

### **Student Activity 12: Television Commercial**

**Concepts that may be considered when evaluating are:**

1. Title
2. Transitions

3. Information included
4. Closing

### **Student Activity 13: Design a T-shirt**

**Concepts that may be considered when evaluating are:**

1. Complete logo included (name of company, graphic, etc.)
2. Correct placement of design on shirt
3. Correctly applied to shirt

### **Student Activity 14: Display Projects**

**Concepts that may be considered when evaluating are:**

1. All projects corrected
2. Appealing display created

## **Applications to the Workplace**

- The students further develop critical thinking skills developing the logo, presentation, and web page.
- The students reviewed creating tables and merging documents while creating the multiple listing books.
- The students will review basic math skills calculating the cost of the advertisement, square footage of home, fair market value, carpet cost and wallpapering.
- The students will review skills learned creating a presentation.
- The students will review skills learned in creating a web page.
- The students will review skills learned on how to produce a television commercial.

## **Integration Across the Curriculum:**

- Math and technology students will work together reviewing basic math skills and computations.
- English students will proofread all materials before final books are assembled.
- Marketing and technology students will work together in determining the cost of the newspaper advertisements.