

Free Market Educational Services: RWC Curriculum

Unit Eleven:



Home Ownership

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LESSON 11.1 *FINDING A HOME*

OBJECTIVE	Students will use an MLS service online to find information about homes for sale
TEKS	7j
VOCABULARY	MLS
ENGAGE	<p>CLASS DISCUSSION: Dream House</p> <p>Ask students to describe their dream house. What kind of features would it have? Is it a home that could be found on the market, or will need to be custom built?</p>
EXPLORE	<p>Finding a home to buy, whether a dream home or one more realistic, can be an arduous process. The real estate industry created a mechanism that allows brokers and agents to share commissions and ultimately help each other find their clients a home to buy.</p> <p>Multiple Listing Service (MLS): private databases created, maintained and paid for by real estate professionals to help their clients buy and sell property</p> <ul style="list-style-type: none"> • Most information on MLSs is available to the public • Some information is only available to real estate professionals in order to protect the privacy of the sellers
ELABORATE	<p>TEACHER NOTE: <i>The remainder of this lesson is designed to give students a chance to explore a local MLS. In Houston, for example, it is www.har.com. Although anyone can access this website and complete the accompanying assignment, it is recommended that teachers use local listing services so that students may become familiar with the housing costs of the market they live in.</i></p> <p>Introduce students to the HAR.com website by finding a home for sale in the neighborhood of one of your students using their zip code. Try and find a home that would be comparable to theirs. Have students research an online payment calculator to figure out an approximate payment for the home.</p> <p>When looking for a home, it is a good idea to work with a realtor and an MLS. Create a criterion for the home you want to buy and find a number of options on the MLS in advance. Take print-outs of each with you to compare as you walk through homes for sale.</p> <p>CLASS DISCUSSION: CRITERIA</p> <p>As a class, make a list on the board of some of their “must haves” and must nots”. For example: Price, commute, # rooms, etc.</p>
EVALUATE	Finding a Home with an MLS: students are to complete the provided handout
RESOURCES	PowerPoint Presentation – 11.1: Finding a Home 11.1a – Using an MLS to Find a Home (Handout)
REFERENCES	MLS: https://www.nar.realtor/topics/nar-doj-settlement/multiple-listing-service-mls-what-is-it

USING AN MLS TO FIND A HOME

INSTRUCTIONS:

Step One: Criteria

For this exercise, imagine what your real-life family will be like in 15 years. Think about the things your family will need and want at that point. Ex: how many garage spaces? How many bedrooms? Pool? Etc. The temptation here is to find the fanciest house you can because that's fun. That's fine, but try to find at least one home that you think is in a reasonable.

<i>Criteria Description</i>	Want or Need
1.	
2.	
3.	
4.	
5.	

Step Two: MLS Research

- Use the website www.har.com to find homes that meet your criteria, plus the criteria provided.
- Houses must be in either Tomball, Cypress, Spring, or Magnolia Texas

House # 1: Price between \$130,000 - \$200,000

Home Address: _____
Address City Zip Code

Year Built: _____ Square Feet: _____ Lot Size: _____

Bedrooms: _____ # Baths: _____ Asking Price: _____ Tax Rate: _____

School District: _____ High School: _____

House # 2: No price restrictions

Home Address: _____
Address City Zip Code

Year Built: _____ Square Feet: _____ Lot Size: _____

Bedrooms: _____ # Baths: _____ Asking Price: _____ Tax Rate: _____

School District: _____ High School: _____

Step Three: Financials to Consider

Use the information gathered in Step Two to complete this portion. Remember, these are just the costs to **OWN** this home. These don't include the costs to **LIVE** in it!

House # 1

Using the tax rate provided and the purchase price, what is the annual tax owed? _____

Using an online mortgage payment calculator, determine the monthly payment.

- The term should be 30 years
- You will need to enter the annual tax dollar amount calculated in the previous question.
- The annual home insurance is \$1,500

Monthly Payment: _____

Monthly Maintenance (\$50/10 years old): _____

Total Monthly Costs of Ownership: _____

House # 2

Using the tax rate provided and the purchase price, what is the annual tax owed? _____

Using an online mortgage payment calculator, determine the monthly payment.

- The term should be 30 years
- You will need to enter the annual tax dollar amount calculated in the previous question.
- The annual home insurance is \$1,500

Monthly Payment: _____

Monthly Maintenance (\$50/10 years old): _____

Total Monthly Costs of Ownership: _____

LESSON 11.2 LOGISTICS OF HOME OWNERSHIP

OBJECTIVE	Students will compare the costs/benefits of home ownership and conclude if renting is better financially than buying a home.
TEKS	7c, 7d, 7e, 7f, 7h, 7i
VOCABULARY	Equity, HOA, Fixed Interest, ARM, Appreciation, Depreciation
ENGAGE	<p>Buying a home is most likely the largest expenditure you will make in your life. Let's compare how it has evolved over the last 100 years:</p> <p>Median Household Income: 1915: \$687 (for a man) - \$16,416 current equivalent 2015: \$53,046</p> <p>Median Cost of a Home: 1915: \$3,200 (for a man) - \$76,468 current equivalent 2015: \$177,600</p> <p>Income to Home Ratio: 1915: 21% 2015: 30%</p> <p>Two important things can be learned from these statistics:</p> <ol style="list-style-type: none"> 1. Our incomes and purchasing power has increased significantly 2. Home values have increased more than double that of inflation
EXPLORE	<p>Despite more expensive housing, Americans now have more money to spend. Let's explore why you would choose to buy a home vs. rent a home/apartment.</p> <p><i>CLASS ACTIVITY: Renting vs. Buying</i></p> <p>Present the following topics and have students identify the differences between renting and buying when it comes to each subject. Have students write their responses in their notes and discuss answers as a class. Topics are:</p> <ol style="list-style-type: none"> 1. Moving 2. Equity 3. Personalization 4. Taxes 5. Repairs/Maintenance 6. Privacy 7. Amenities
ELABORATE	<p>The financial impact of owning a home goes far beyond just the purchase price.</p> <p>Main Costs of Home Ownership:</p> <ol style="list-style-type: none"> 1. Utility Bills: <ul style="list-style-type: none"> ○ Electric ○ Gas ○ Water/Sewer/Garbage 2. Homeowner's Insurance 3. Maintenance/Repairs 4. Home Owner's Association (HOA) fees

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5. Property Taxes
 - Fluctuate by location
 - Based on property values determined by government assessors
 - City, County, and School Districts determine property tax rates
 - Used for education, emergency services, transportation, parks, etc.

Unless you pay cash for a home, you must pay INTEREST on your mortgage.

There are 2 ways to structure interest for home loans:

1. **Fixed Interest:** interest rates/payments are locked in for life of loan
 - Good for buyers who plan to own for long-term
2. **Adjustable Rate Mortgage (ARM):** interest rates/payments can change periodically
 - Interest rate is fixed at a lower rate for the first specified years (1,3,5, or 7) and then will adjust annually. Usually goes up.
 - Popular for buyers not planning on keeping home for more than the original low rate.

When owning a home, the value of the property can change over time. As we discussed earlier, home values have increased at an even higher rate than inflation.

This is called appreciation.

- **Appreciation:** value of property goes up over time
 - Demand (good economic – job – growth)
 - Shortage (not a lot of homes on the market)
 - Inflation
 - **QUESTION:** With inflation, the price of homes increases. But does that mean the value of the home has increased?
- **Depreciation:** value of property goes down over time
 - Lack of demand (bad economic times – jobs leaving)
 - Surplus (too many homes on the market)
 - Condition of the home
 - Negative neighborhood changes

Common Factors Effecting Home Values:

1. Location
 - Commercial vs Green Area
 - Commute
 - Neighborhood
 - Crime
 - Schools
2. Comparable Sales
 - Houses on the market
 - Houses sold in last 6 months
3. Lot (land house is on)
 - Shape
 - Size
 - Location (corner, cul-de-sac, etc.)
4. Building
 - Red Flags for Buyers:
 - Large cracks across floors/walls
 - Indoor pets

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- Water spots
- Insects/pests
- Good Upgrades:
 - Kitchen/Bath
 - Flooring
 - Paint

EVALUATE

REFLECTION ASSIGNMENT: *Renting vs. Owning*

Have students make a side-by-side list of all the finances associated with renting an apartment versus owning a home. Then, have them identify, item-by-item, which would be more expensive. Have them come to an overall conclusion and summarize their results in a paragraph.

EX: “X” represents which one is better financially

	<u>Renting</u>	<u>Owning</u>
1. Utilities	X	
2. Taxes		X
3. Repairs	X	

Financially speaking, I think that owning is better. Although you can save money month-to-month with renting, I think the tax benefit outweighs...

RESOURCES

PowerPoint Presentation – 11.2: Logistics of Home Ownership

REFERENCES

Interest and insurance for loan types:

<http://themortgagereports.com/17092/fha-mortgage-insurance-premiums-mip-change-2015>

<https://www.quickenloans.com/blog/new-rules-for-fha-and-conventional-loans-could-save-you-money>

VA Loans

<https://www.veteransunited.com/va-loans/va-home-loan-advantages/>

Property Tax

<http://www.investopedia.com/articles/tax/09/calculate-property-tax.asp>

Appreciation and depreciation factors

<https://www.discover.com/home-loans/blog/understanding-appreciation-and-depreciation-of-home-values>

1915-2015 Comparisons

<http://money.usnews.com/money/personal-finance/articles/2015/01/02/a-glimpse-at-your-expenses-100-years-ago>

https://www.bls.gov/data/inflation_calculator.htm

LESSON 11.3 *THE BUYING PROCESS*

OBJECTIVE	Students will be introduced to the various steps involved in buying a home. They will apply many of these steps in-class to purchase desks that represent homes. 2 days
TEKS	7a, 7d, 7f, 7g, 7i,
VOCABULARY	Pre-Qualified, Earnest Money, Option Period, Buyer/Seller Market, Appraisal, LTV, Escrow
ENGAGE	Ask the students how many of them have ever moved before? Discuss if any of them remember much about the process their family went through to find the new home and if they used a realtor. Give students the opportunity to share their experiences.
EXPLORE	<p><i>TEACHER: if any of the students who participated in the previous activity indicated that they used a realtor. Have them share what they remember the realtor doing. Further discuss the class' understanding of the role a realtor is.</i></p> <p>Using a Realtor: realtors help the home buying process go smoothly.</p> <ul style="list-style-type: none"> • Help the buyer gather the information to make an informed decision • Schedule, arrange, and supervise showings of available properties • Prepare the legal paperwork and schedule meetings to make sure everything is written, executed, and filed properly. • Communicate and negotiate terms with the seller or the selling agent.
ELABORATE	<p>Home Buying Process: There are many things that go into buying a home. It can be one of the most complex purchases you will ever make and it is important to understand the process in order to make wise financial choices throughout.</p> <p>Step 1: <i>Get Pre-Qualified for Financing</i></p> <ul style="list-style-type: none"> • Apply to see if you are qualified to borrow up to specific amount <ul style="list-style-type: none"> ○ Pre-qualification tells you the maximum home loan available • 3 Major Factors Considered: <ol style="list-style-type: none"> 1. Credit Score/Report: credit report/score is the way the real-world grades how risky you are to loan money to. 2. Financials: they will look at your income, cash, and debts <ul style="list-style-type: none"> ▪ Annual Income: Last 2 years of tax returns ▪ Pay Stubs: 2 most recent paystubs ▪ Bank Statements/Balance: Last 3 months ▪ Debt/Income Ratio: <ul style="list-style-type: none"> ○ House Payment: must be less than 28% of your monthly gross ○ Total Consumer Debt Payments: less than 36% 3. Employment: can you be counted on to continue to earn money <ul style="list-style-type: none"> ▪ W2's for the last 2 years • This is not a <i>pre-approval</i>. Approval comes after the bank evaluates the collateral (house) you want to use for the loan. <p>Step Two: <i>Criteria and Research – Know Your Options</i></p>

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- Don't expect a realtor to find you the perfect house
 - Review available listings often to be familiar with what is on the market
- Step Three: *Get a Home Under Contract*
- **IMPORTANT:** An official offer is a **legally binding** contract.
 - Offers are made with the buyer's signature already on it.
 - Don't make an offer you are unsure about!
 - A home is considered "Under Contract" when both parties have signed the offer. The home can no longer be shown to other potential buyers.

TEACHER: the handout "Major Features of a Real Estate Contract" contains all of the following points and can be used as a supplemental resource for this material. Have students work in groups to review the material. Each group should come up with 1-2 clarifying questions about the content of the handout. These questions can guide a short class discussion and act as a break in the lesson.

- Contract Main Points:
 1. Property and Parties: Price, Address, Seller, Buyer, Title Company, and Agents
 2. Earnest Money: acts like a holding deposit to get the seller to take the home off the market and stop trying to get offers.
 - Typically, the greater of \$2,000 or 1% of asking price
 3. Property Condition:
 - Seller must provide "Seller's Disclosure" which is a list of all known issues.
 4. Closing Date: date the sell will actually go through.
 5. Possession: designates when the buyer gets keys to the property.
 - Usually once funding from the bank is received.
 6. Option Period: how long the buyer has to cancel the contract and get their earnest money back.
 - Usually costs a \$100 or \$200 non-refundable fee.
 - Homes in the option period are considered "Pending" and are typically no longer shown.
 - Buyer pays to get a professional inspection done during the option period. Usually costs about \$400.
 - Contracts can be cancelled during the option period without penalty. Otherwise, buyer forfeits earnest money.
- Negotiating a Contract:
 - Always **negotiate for money** and not for improvements or repairs
 - Sellers are motivated to do repairs *inexpensively*
 - **Evidence** is a more powerful leverage than preference.
 - Comparable homes that have **sold** in the last 6 months
 - Comparable homes that are **on the market** currently
 - Repairs needed for *safety* or *structural integrity*
 - Ex: electrical issues or leaky roof
 - Items from inspection report that **need** repair/replacing for an expected reasonable standard of living
 - Ex: AC unit or deteriorated pipes
 - **Supply and Demand** rule supreme in negotiations
 - *Buyers' Market*: lots of homes for sale, buyer can negotiate for preferential wants (Ex: carpet and paint).

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- *Seller's Market*: few homes for sale, seller isn't motivated to negotiate because someone will buy as-is.

Step 4: *Obtain Financing*

- Buyer has 30-45 days after the option period to obtain financing.
- **Appraisal**: an independent firm's assessment of the value of the home
 - Ordered by the bank after the option period
 - Buyer pays for the appraisal
- **Loan to Value (LTV) Ratio**: Banks will lend a percentage of the lesser of
 - 1) The appraised value of the home
 - 2) The purchase price of the home
 - Ex: If your bank's LTV is 80%, and the purchase price is \$120K, you will have to have \$24K as a down payment to get the loan.
 - Banks will never loan more than the appraised value of a home.
- If financing cannot be obtained by closing, the buyer could lose their earnest money and the home is free to go back on the market.

Step 5: *Closing & Title*

- Buyer and seller meet with a title company separately to sign all of the legal documents transferring ownership of the home
- Once all documents are signed and the title company gets funding from the buyer's bank they will turn over the keys to the new owner.
- Banks keep the title to the home on file for as long as the loan is active.
- The bank will collect your property taxes with your mortgage payments and keep them in a special account called an "escrow" account. Then when the taxes are due, the bank will pay them for you.

EVALUATE

Students will complete the handout "Pre- Qualification Application" In preparation for buying an in-class home.

TEACHER NOTE: You will need to create at least one property in the "Home Listings" page of the RWC Teacher Portal. The worksheet students will be completing calls this the "LOAN QUALIFICATION HOUSE", so you will want to title this the same. It does not matter what the price of this home is or any of its features. It is only going to be used to calculate payments by students. Make sure that it is listed as "ACTIVE". It is suggested that at this point all other homes created by inactive.

RESOURCES

PowerPoint Presentation – 11.3: The Buying Process
 11.3a – Major Features of a Real Estate Contract" handout
 11.3b – Pre-Qualification Application handout

REFERENCES

Bank lending information:
<https://www.learnvest.com/knowledge-center/how-banks-decide-how-much-to-lend-you/>

Loan-to-Value

<http://www.investopedia.com/terms/l/loantovalue.asp>

Real Estate Contract Info

<https://www.trec.texas.gov/formslawscontracts/forms/forms-contracts.asp>

MAJOR FEATURES OF A REAL ESTATE CONTRACT

- **Property and Parties:** Price, Address, Seller, Buyer, Title Company, and Agents
- **Earnest Money:** acts like a holding deposit to get the seller to take the home off the market and stop trying to get offers.
 - Typically, the greater of \$2,000 or 1% of asking price
- **Property Condition:**
 - Typically, contracts designate the property be sold “as-is” and then an amendment is added to the contract for anything that might change after the inspection is done.
 - Seller must provide “Seller’s Disclosure” which is a list of all known issues.
 - Below is an excerpt from an actual seller’s disclosure of a property sold in Spring, Texas

Section 1. The Property has the items marked below: (Mark Yes (Y), No (N), or Unknown (U).)

This notice does not establish the items to be conveyed. The contract will determine which items will & will not convey.

Item	Y	N	U	Item	Y	N	U	Item	Y	N	U
Cable TV Wiring	X			Liquid Propane Gas:		X		Pump: <input type="checkbox"/> sump <input type="checkbox"/> grinder		X	
Carbon Monoxide Det.	X			-LP Community (Captive)		X		Rain Gutters		X	
Ceiling Fans	X			-LP on Property		X		Range/Stove	X		
Cooktop	X			Hot Tub		X		Roof/Attic Vents	X		
Dishwasher	X			Intercom System		X		Sauna		X	
Disposal	X			Microwave	X			Smoke Detector	X		
Emergency Escape Ladder(s)		X		Outdoor Grill		X		Smoke Detector – Hearing Impaired		X	
Exhaust Fans	X			Patio/Decking	X			Spa		X	
Fences	X			Plumbing System	X			Trash Compactor		X	
Fire Detection Equip.		X		Pool		X		TV Antenna		X	
French Drain		X		Pool Equipment		X		Washer/Dryer Hookup	X		
Gas Fixtures	X			Pool Maint. Accessories		X		Window Screens	X		
Natural Gas Lines	X			Pool Heater		X		Public Sewer System	X		

- **Closing Date:** date the sell will actually go through
- **Possession:** designates when the buyer gets keys to the property.
 - Usually once funding from the bank is received.
- **Option Period:** how long the buyer has to cancel the contract and get their earnest money back.
 - Usually costs a \$100 or \$200 non-refundable fee.
 - Homes in the option period are considered “Pending” and are typically no longer shown.
 - Buyer pays to get a professional inspection done during the option period. Usually costs about \$400.
 - Contracts can be cancelled during the option period without penalty. Otherwise, buyer forfeits earnest money.

Name: _____ Period: _____

PRE-QUALIFICATION APPLICATION

1. **Pay stubs:** fill in the following information from your **last** pay stub.

Paycheck Date	Gross (Total) Pay	Net Pay

2. **Adjusted Gross Income:** Find this information on your Year 1 FORM 1040 RWC tax filings.

Year 1 Adjusted Gross Income (Line 17): _____ Check here is AGI is "Unknown":

3. **Academic Performance:** find the following information on the "Performance Review" page found under the *Reports* menu on the RWC Student Portal. Not everything is posted and some will require calculations.

Average Score	Total Change in Salary	Average Change in Salary

4. **Bank Balances:** fill in the following information regarding your *current* account balances.

Checking Balance	Savings Balance	Stock Balance

5. **25% Ratio Payment:** _____

- Calculate the maximum payment allowed based on your gross salary by using the following formula. Show your work in the space provided below so I know you set it up right. Then record your answer in the space above.

$$(Monthly\ Gross) \times 0.25 = (Maximum\ Payment)$$

6. **35% Ratio Payment:** _____

Step One: add up all of your **monthly** debt payments including: Credit Cards, Student Loans, Car Payments, & Personal Loans. Include **ONLY** debts. List each debt and their payments in the space below.

Debts	Mo. Payment

Step Two: calculate the maximum payment using the formula below. Show your work in the space provided then record your answer below. Write your answer in the space provided above.

Total Debt Payments: _____

$$[(Monthly\ Gross) \times 0.35] - Total\ Monthly\ Debt\ Payments = (Maximum\ Payment)$$

For the remaining questions, you will need to open a Loan Application in the RWC Portal for the home listed as “LOAN QUALIFICATION HOUSE”. You will not actually be submitting an application for this home, just using it to see what you qualify for.

7. **Credit Score:** _____ 8. **Interest Rate:** _____

9. **Maximum Payment:** Go back and **CIRCLE** whichever answer is **SMALLER** between Number 6 and Number 7. This is the maximum *payment* you will be approved for.

10. **Maximum Loan Amount:** Complete the following steps and enter the final amount in the space provided.

- a. Enter an offer price in the “Your Offer Price” section, the *Loan Calculator*. This will produce a total monthly payment (PITI).
- b. Continue adjusting this number and hitting the “Update” button until you have discovered the maximum loan amount that produces a payment equal to or less than the payment you circled for Number 9.

Loan Calculator	
Loan Amount	\$146,829.00
Interest Rate	5%
Loan Term (Months)	360
Monthly Payment (PITI)	\$1,288.21
Principle & Interest (PI)	\$788.21
Tax & Insurance (TI)	\$500.00

Max Loan Amount: _____

11. **Required Down Payment:** Down Payments are a *percentage* of the **value of the home**. For this portion of the application, do NOT refer to the loan calculator on the RWC Portal. Complete the following steps and enter the amount in the space provided.

- a. Calculate your down payment requirement* based on the maximum loan amount you are qualified for (use your answer to Number 10) and the percentage you are required to pay.
- b. If your credit score is in the 800’s, you will not be required to make a down payment. If it is in the 700’s it will be 3.5% and if it is in the 600’s, it will be 5%. If your credit score is below 600, you do not qualify for a loan. Show your work below to illustrate that you have set it up correctly.

Down Payment Amount: _____ **Do you Have it*:**

YES	NO

* If you offer MORE for a home than it is worth, you will be required to make the percentage down payment PLUS any amount over the value listed that you offer. Ex: a home is worth (listed as) \$100,000. If you are required to pay 5% and you offer \$110,000, you will have to pay \$5,000 as the required down payment PLUS the additional \$10,000 for your over-bid offer for a total down payment of \$15,000.

** You are NOT allowed to go into debt for the down payment. You must either have the money in your checking account, savings account, or have stocks to sell.

LESSON 11.4 *MORTGAGES*

OBJECTIVE	Students will create an amortization to analyze the changes to mortgage debt and payments when varying additional principal payments, down payments, period of loan, and interest rates.						
TEKS	7a & 7b						
VOCABULARY	Conventional mortgage, FHA, VA loan						
ENGAGE	<p>Ask students what percentage of home purchases in the following categories were done with a mortgage:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Primary Residence*</th> <th style="text-align: center;">Vacation Home**</th> <th style="text-align: center;">Investment Property**</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">91%</td> <td style="text-align: center;">63%</td> <td style="text-align: center;">39%</td> </tr> </tbody> </table> <p style="text-align: right;">* Data as of 2010 ** Data as of 2011</p> <p><i>TEACHER: You may choose to make a game of this by offering bonus money to students who guess within a certain percent without going over, guessing the closest, guessing the right order, etc.</i></p>	Primary Residence*	Vacation Home**	Investment Property**	91%	63%	39%
Primary Residence*	Vacation Home**	Investment Property**					
91%	63%	39%					
EXPLORE	<p>The majority of buyers take out a loan to buy their home. It is important to understand all the factors that can impact a home mortgage.</p> <p><i>CLASS DISCUSSION:</i> As a class, make a list of factors that students would expect to impact a mortgage (help them understand that a mortgage encompasses more than just the monthly payment and can include the total debt and interest). When done, the list should include at least the following items:</p> <ul style="list-style-type: none"> • Interest Rate • Down Payment • Additional principle payments • Term 						
ELABORATE	<p>3 Most Common Loans:</p> <ol style="list-style-type: none"> 1. <i>Conventional:</i> <ul style="list-style-type: none"> • Minimum of 5% down payment required • Require Private Mortgage Insurance (PMI) until 80% loan/value <ul style="list-style-type: none"> ○ Depending on credit score, it ranges from 0.3%-1.5% of home value annually 2. <i>FHA:</i> <ul style="list-style-type: none"> • Down payment as low as 3.5% • Loans are insured by the Federal Housing Administration • Require Mortgage Insurance Premiums (MIP) for life of loan <ul style="list-style-type: none"> ○ 0.85% of home value annually • Good for first-time home buyers 3. <i>VA:</i> <ul style="list-style-type: none"> • No down payment required • No PMI • Guaranteed by Veteran’s Administration 						

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- Must either be a veteran or active-duty military to qualify

When financing a home, there are lots of loan types to choose from. The loan obtained will be based on:

- Buyer's Credit Report/Score
- Buyer's Income/Debt

The amount it is for is based on:

- Value of the Home

EVALUATE

Students will use an online tool for amortizing mortgages to complete the worksheet "Factors that Impact a Mortgage".

RESOURCES

PowerPoint Presentation – 11.4: Mortgages

11.4 – Factors that Impact a Mortgage (Worksheet)

Bankrate.com Mortgage Calculator:

<http://www.bankrate.com/calculators/mortgages/mortgage-payment-calculator.aspx>

REFERENCES

Percent of homes purchased with mortgage:

<http://economistsoutlook.blogs.realtor.org/2011/06/21/percent-of-home-financed-by-type-of-home-purchased/>

FACTORS THAT IMPACT A MORTGAGE – TEACHER GUIDE

TEACHER NOTE: This activity uses an online mortgage calculator that is NOT part of the RWC portal software. The calculator is featured on the Bankrate.com website and is an excellent tool. The link to this is: <http://www.bankrate.com/calculators/mortgages/mortgage-payment-calculator.aspx>

It is suggested that this be hyperlinked somewhere on your teacher websites for easy access.

OBJECTIVE:

Students will analyze the impact on mortgage payments of different variables including prepayment amounts, loan term, interest rate, and taxes/insurance. They will use an online calculator tool to create an amortization table to further analyze the variables and apply this knowledge in the decision-making process.

TEKS: 7A & 7B

RUBRIC:

1.
 - a. \$1,122.61
 - b. \$1,872.61
2.
 - a. \$404,141.00
 - b. \$154,141.00
3.
 - a. Principal: \$393.44
Interest: \$729.17
 - b. 124
4.
 - a. \$237,500
 - b. 2.5 years
5.
 - a. \$23,248.78
 - b. 26 years
6.
 - a. \$664.60
 - b. \$82,444
7.
 - a. \$144.10
 - b. \$51,877
8.
 - a. \$104.17
9.
 - a. \$34,481.27
 - b. 5 years and 11 month

FACTORS THAT IMPACT A MORTGAGE**INSTRUCTIONS:**

This assignment will help you identify how the different variables of a home loan change the mortgage over time and month-to-month.

1. Go to the online mortgage calculator (the link is found on my class website) and enter the loan information as listed below.

Mortgage Amount	Term in Years	Interest Rate	Annual Property Tax	Annual Home Insurance
\$250,000	30	3.5%	\$7,500	\$1,500

- a. How much is the payment portion that goes to the bank (PI)?
 - b. What is the *total* monthly payment (PITI)?
2. Make sure the “Report Amortization” option (located beneath the payments) is on *monthly* then click the “View Report” button (located above the loan information table). Scroll down to get additional information.
 - a. How much will you pay in *total* (Total Payments)?
 - b. How much of that is *interest* paid to the bank?
 3. Scroll down to view the amortization schedule. An **amortization schedule** is a breakdown of a loan’s monthly payments illustrating the change in principal-to-interest ratio for the life of the loan.
 - a. How much of the first payment goes to principal and how much toward interest?

Principal: _____ Interest: _____
 - b. When will you finally have more of your payment go toward principal than interest?

Payment # _____
 4. In order to refinance you must have 95% LTV. Assuming the original mortgage amount represents how much the home is worth, answer the following:
 - a. How much is 95% of the value of the home?
 - b. How many years will you have to make regular payments in order to get the loan down to 95% LTV and be eligible to refinance?

5. Click on the “Hide Report” button at the top of the page. This will take you back to the original loan calculator. Click the [+] sign to expand the “Prepayment” section. **Prepayments** refer to extra payments made in addition to your regular mortgage. 100% of these payments go toward your principal loan amount. Change the “Prepayment Type” to “monthly”, change the amount to \$100, and have it start with payment 1. Click “View Report” and scroll down to the “Prepayment Results”.
 - a. How much in total interest did you save simply by paying an extra \$100/month?
 - b. How many years – instead of 30 – did it take to pay off the mortgage this way?

Before moving on, remove the prepayment by changing the “Payment type” back to “none”. For the remaining problems, you will need to repeat the process done in previous steps to change the variables that impact a mortgage. Remember, to get back to the calculator you will hit the “Hide Report” button and so on. After each problem, reset whatever changes were made so that it reverts back to the loan factors listed in problem #1.

6. **Change the term** of the loan to 15 years.
 - a. How much did your PITI *increase* due to the change?
 - b. How much *total interest* will you *save* over the life of this loan due to the shorter term?
7. **Change the interest rate** of the loan to 4.5%.
 - a. How much did your PITI *increase* due to the change?
 - b. How much more *total interest* will you *pay* over the life of this loan due to this 1% increase?
8. **Change the property taxes** to \$6,250. This is a .5% reduction in taxes.
 - a. How much did your PITI *decrease* due to the change in tax rate?
9. **Change the prepayment** to “yearly” instead of none and in the amount of \$1,872.61 starting with the first payment. This is what would happen if you paid **one extra payment** each year.
 - a. How much will you *save* in interest over the life of the loan?
 - b. How much *faster* will you pay off your mortgage?
10. In the space provided below, describe what factors influenced the mortgage payments and total interest paid the most. Explain which factors you think are the most important and how you can take advantage of this knowledge.

LESSON 11.5 AMORTIZING A LOAN – TEACHER GUIDE

OBJECTIVE:

Students will use amortization schedules to organize data and make graphic illustrations in order to demonstrate the impact of various factors such as equal monthly payments, special principle payments, varying term lengths, and interest rates on loans.

TEKS: 6F & 8A

TEACHER INSTRUCTIONS:

Have students complete the worksheet entitled “Amortizing a Loan”. Students will need access to the “Amortization Tables” spreadsheet file.

The spreadsheet file was created in Microsoft Excel. Each student will need to be able to access their own copy of this file and NOT a shared copy. This can be done a number of ways. One suggestion would be to create a Google Sheet file by copying and pasting the content from the Excel spreadsheet and then share the Sheet with the class. Make sure that when you share it that it is shared as **VIEW ONLY** and not as able to edit. Finally, have each student **make a copy** of this file by right-clicking on the file and selecting “Make a Copy”. Once they have made a copy, they can then edit it.

RESOURCES:

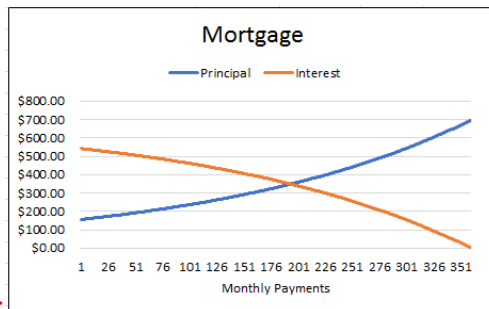
11.5a - Amortizing a Loan – Worksheet

11.5b - Amortization Tables

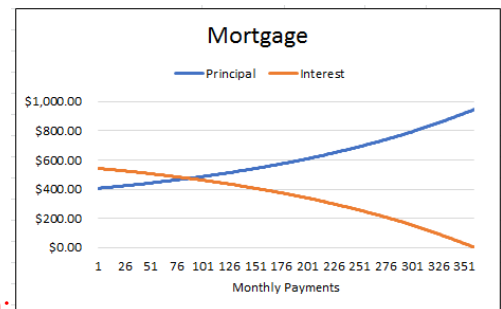
RUBRIC:

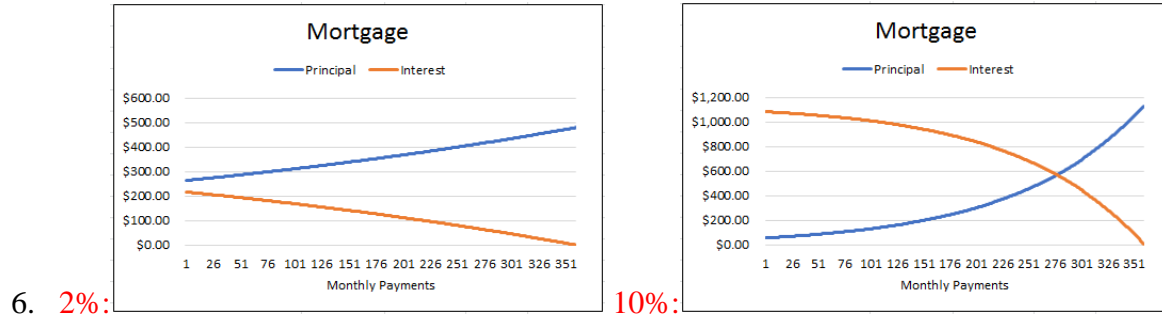
1. \$697.87
2. \$121,232.52
3. 9 years 3 months
4. \$77,463.36

5. Regular:



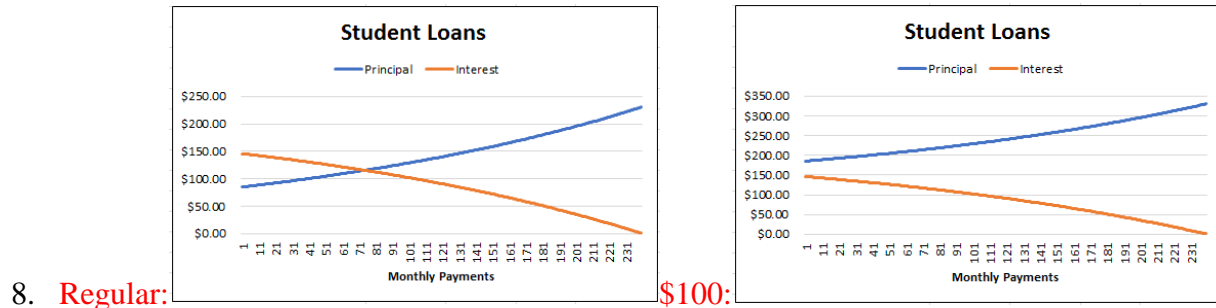
\$250 Extra:





7. Principle/Interest Comparison

First Payment		Last Payment	
Principle (\$)	Interest (\$)	Principle (\$)	Interest(\$)
\$85.15	\$145.83	\$230.03	\$0.96



9. This is really a no-wrong-answer question. The longer term definitely has more impact though. The **size of loan won't impact the frontloading much** at all and that is the connection to look for.

10. Payment: **\$322.10**, Principle: **\$238.77**, Interest: **\$83.33**

11. Payment Increase: **\$100.8**

12. Interest Increase: **\$166.67**

13. Again, no wrong answer. The connection is that as well as term, the **interest rate will also make the frontloading worse, especially with shorter loans** like car loans.

Name: _____ Period: _____

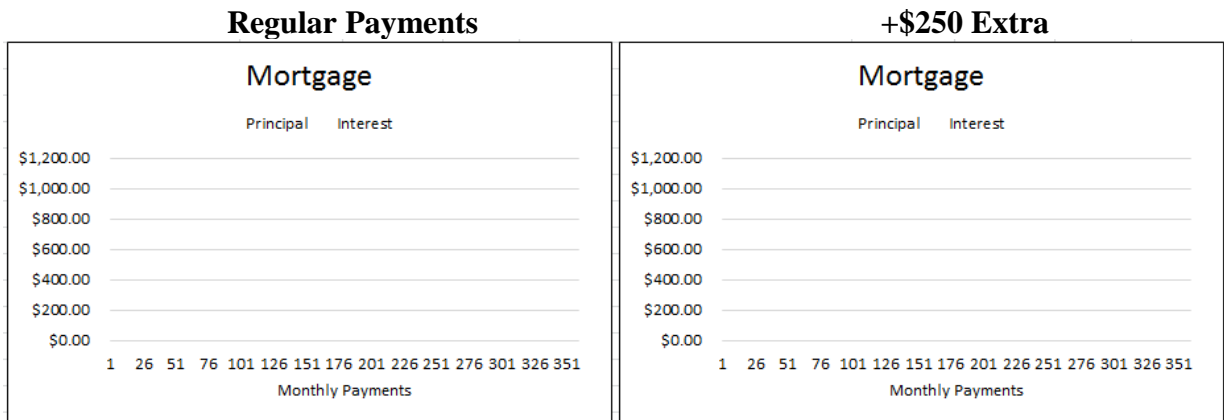
AMORTIZING A LOAN

HOME MORTGAGE

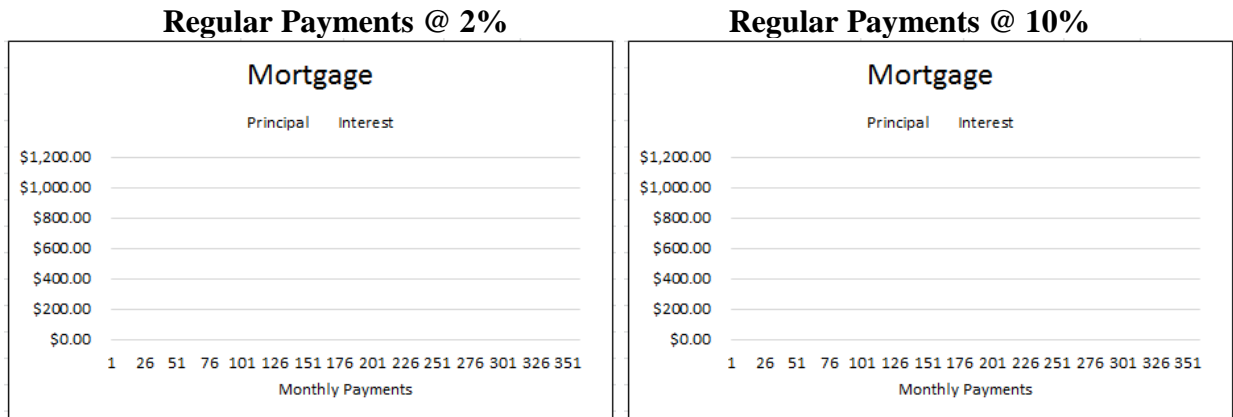
Using the Amortization Schedule for *Mortgages*, enter the information below and then answer Numbers 1-6.

- Loan Amount: \$130,000
- Interest: 5%
- Years: 30

1. What is the monthly payment for this loan? _____
2. How much in total interest will you pay? _____
3. Now, enter \$250 under “Extra Each Month”. How much faster (years and months) will you pay this loan off as a result of this extra monthly payment? _____
4. How much money in payments will you save because you paid it off early? _____
5. Draw line graphs to illustrate the change in principle and interest over the life of this loan in the graphs below. Make sure that the two lines are different (Solid/Dashes or Colors) and label the key accordingly. In the first graph, illustrate what it looked like with regular payments only before adding the extra money. In the second, illustrate what it looks like after you added the extra \$250 a month.



6. Change “Extra Each Month” back to zero. Now, change the “Annual Interest Rate” and draw graphs based on the new interest rates as indicated below.



STUDENT LOANS

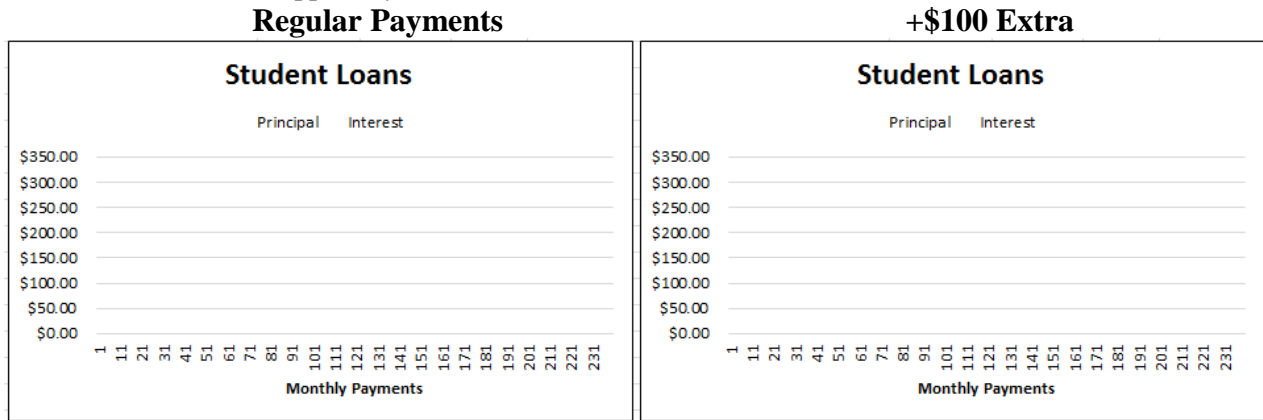
Using the Amortization Schedule for *Student Loans*, enter the information below and answer Numbers 7-12.

- Loan Amount: \$35,000
- Interest: 5%
- Years: 20

7. Look at the amortization schedule. Compare the payment breakdown of Principle/Interest:

First Payment		Last Payment	
Principle (\$)	Interest (\$)	Principle (\$)	Interest(\$)

8. Now, enter \$100 under “Extra Each Month”. Draw line graphs to illustrate the change in principle and interest over the life of the previous loan in the graphs below. Make sure that the two lines are different (Solid/Dashes or Colors) and label the key accordingly. In the first graph, illustrate regular payments only. In the second, illustrate what would happen if you added \$100 a month.



9. In your own words, explain why you think there was such a bigger difference in the frontloading when you added the extra to the Student Loans compared to when you added an even bigger amount extra to the Mortgage? Was the bigger factor the larger loan, or the longer term (years)?

AUTO LOANS

Using the Amortization Schedule for *Mortgages*, enter the information below and then answer Numbers 1-6.

- Loan Amount: \$20,000
- Interest: 5%
- Years: 6

10. What are the payment and the breakdown of Principle/Interest for your first payment?

Payment: _____ Principle: _____ Interest: _____

11. Now, change the interest to 15%. How much did your payment go up by? _____

12. How much did the *interest* portion of your *first* payment go up by? _____

13. In your own words, explain why you think the frontloading was so much worse with the higher rate even though nothing else changed with the loan.

LESSON 11-6 – *IN-CLASS HOUSING: HOUSES* – TEACHER GUIDE

OBJECTIVE:

Through an in-class simulation, students will experience the process of pre-qualifying for a loan, putting in an offer, potentially dealing with counter offer opportunities, and buying a house.

TEKS: 7A, 7D, 7F, 7G, AND 7I

RESOURCES:

- “In-Class Homes and Apartments” Excel spreadsheet

TEACHER INSTRUCTIONS:

Although offer submissions will be done through the RWC Teacher Portal, it is suggested that teachers make a map of their room (See Example Classroom section for an example of a classroom map) with the different neighborhoods that is easily marked and differentiated by price, etc. to be used by students as they think about their decisions. Instruct each student to refer to their Pre-Qualification Applications and to consider carefully their budgets, their goals, and to use the decision-making model as they determine which apartments to apply for.

Have students go log on to the *RWC Portal* to review the homes available in order to make offers on properties.

Refer to the *Teacher Guide - Using the RWC Simulation* for tips and instructions on how to create an effective classroom housing market. The neighborhoods created can be a great strategic tool to help with classroom management and the learning environment. Refer to the *Teacher Guide - RWC Teacher Portal* for instructions on how to create the housing options within the RWC simulation portal for students to be able to apply for.

NEIGHBORHOOD OPTIONS:

The following neighborhood options are an example of how a classroom may be subdivided to create differentiated values. Teachers are welcome to follow this guide or adjust to make their own.

1. **Gated Community:** Most expensive, 1 or 2 good perks, a few desks
2. **Upper-Middle Class:** Average pricing, 1 decent perk, fair amount of desks
3. **Blue-Collar:** Good pricing, no perks, fair amount of desks
4. **Slums:** Relatively inexpensive rent (but increased from apartment slums), no perks, a few desks
 - Once a week, do something (such as roll dice) to see if someone is robbed.
 - This could simulate the very real dangers related to living in certain conditions and to discourage students in class from choosing their housing based solely (and unrealistically) on the financial benefits while ignoring other factors.

Make sure that all the homes intended to be available to students are “Active”.

LOAN APPROVAL:

Throughout this process teachers will want to refer to the spreadsheet created as a result of the “Pre-Qualification Application” assignment given earlier in this unit. Students will submit “offers” for homes and teachers will see them in the *RWC Teacher Portal* on the “Home Auction” page. Once a student’s offer is accepted for a home that property will be taken off the market and other students will no longer be able to see it or submit offers on it.

As an option, teachers may wish to instruct students to submit offers for more than one home in case their first choice is given to someone else. If this is the case, and a student has more than one offer accepted by accident, the teacher needs to DELETE the extra property and then create/import it again to put it back on the market. Students are automatically refunded down payments for properties that are deleted.

It is suggested that students be approved based on factors such as income and credit score to simulate as much of the real-world process as possible. However, teachers may choose to make exceptions in order to facilitate a more constructive learning environment. Remember, home offers are not accepted automatically in the RWC software like an item being purchased. Teachers have final approval of who is awarded which apartment. The “Home Auction” page of the *RWC Teacher Portal* will show all of the students that have submitted offers on each listing and what their respective credit score is. Teachers may choose to consider other factors as well at their discretion.

Some students will apply for apartments that are not the best financial decision for them. Although teachers should help students work out the financial mathematic aspects of this assignment, it is suggested that they do not try to influence the *decision* too much. Students will learn more from making their own choices and dealing with the consequences, or seeing other students do so, than they will from being coached through the process. Do not be afraid to let some students become “house poor”. That is one of the primary lessons to be learned through this simulation.

That being said, it is strongly suggested that students not be approved for loans they do not qualify for. Doing this may cause them to get into more financial problems than necessary (unless of course teachers want to simulate the housing bubble burst from 2008) as well as undermine the integrity of the RWC Lab simulation experience.

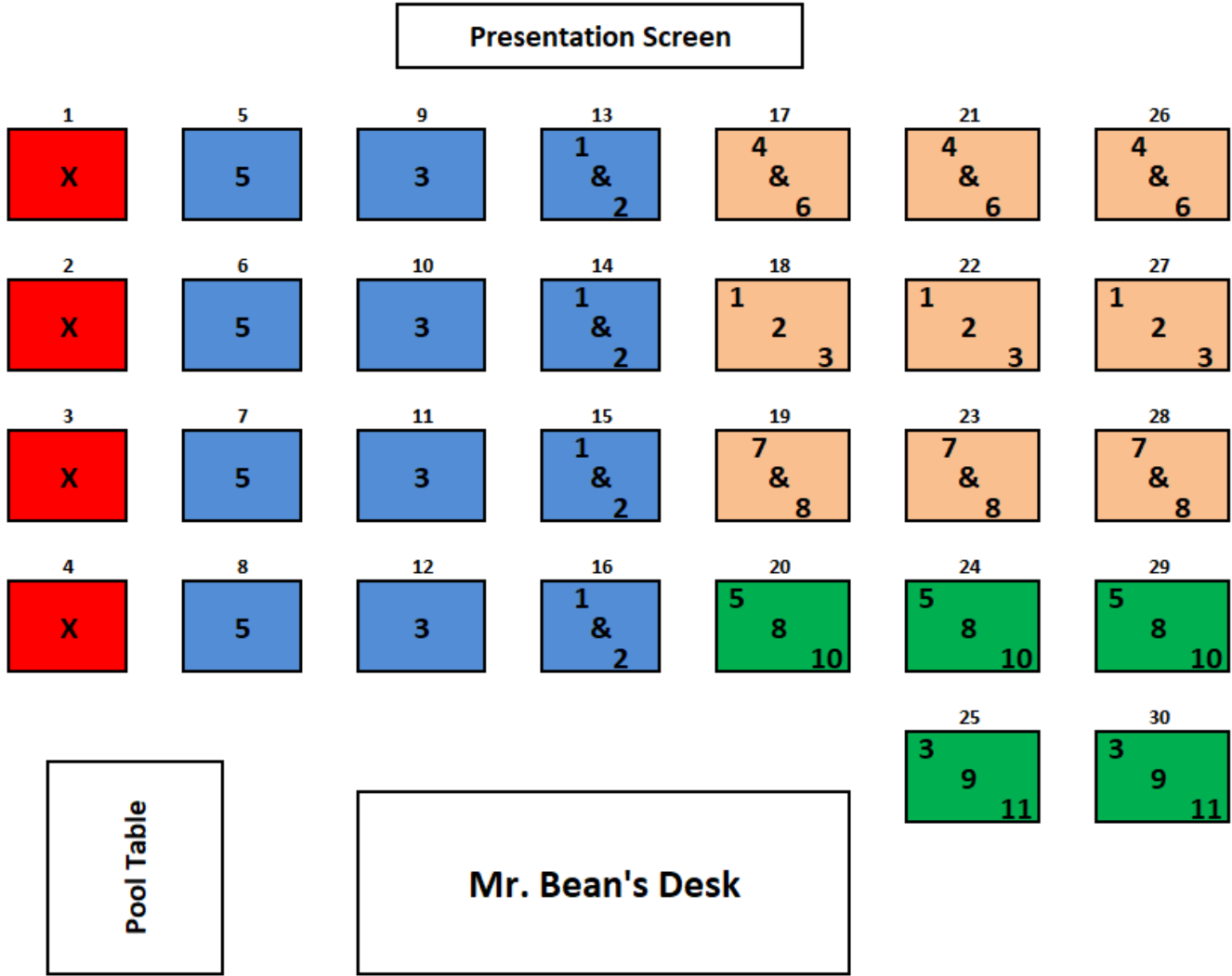
TEACHER NOTE: It is suggested that if there are more homes than approved borrowers, that some apartments be created to house those students who do not qualify so they still have somewhere to sit and continue having a monthly rent payment to manage.

EXAMPLE CLASSROOM:

Although teachers are able to create any perks they want and assign them in any way they choose, it is suggested that the homes be more valuable relative to the apartments so that students feel like there is an upgrade when transitioning to them. Use the “In-Class Homes and Apartments” Excel spreadsheet as a guide to create your neighborhoods and maps.

The following page contains an example of a classroom setup.

Map with Perks



Suggested Pricing and Perk Explanation:

Desk 1	\$750/mo
Desk 2	\$750/mo
Desk 3	\$750/mo
Desk 4	\$750/mo
Desk 5	\$92K
Desk 6	\$93K
Desk 7	\$95K
Desk 8	\$95K
Desk 9	\$91K
Desk 10	\$93K
Desk 11	\$94K
Desk 12	\$95K
Desk 13	\$90K
Desk 14	\$92K
Desk 15	\$94K

Desk 16	\$95K
Desk 17	\$123K
Desk 18	\$125K
Desk 19	\$125K
Desk 20	\$148K
Desk 21	\$122K
Desk 22	\$124K
Desk 23	\$125K
Desk 24	\$150K
Desk 25	\$155K
Desk 26	\$120K
Desk 27	\$122K
Desk 28	\$124K
Desk 29	\$155K
Desk 30	\$158K

- Perk 1: Test Resource: 3x5 Card
- Perk 2: Free Software License
- Perk 3: Life Happens Redraw
- Perk 4: Test Resource: One Free Question
- Perk 5: Free Computer Plan
- Perk 6: One Assignment Dropped per Quarter
- Perk 7: Life Happens Multiple-Redraw
- Perk 8: Test Resource: Open Note
- Perk 9: Free Phone Upgrade
- Perk 10: 3 Free Stocks Weekly from this Class
- Perk 11: Test Resource: Computer Use