

Lesson Plan – Completing a Loan Application Part I

Course Title: Banking & Financial Systems

Session Title: Completing a Loan Application Part I

Performance Objective:

- Upon completion of this lesson, the student will understand finance terms associated with the loan application process.

Specific Objectives:

- Students will identify finance terms linked to a consumer loan.
- Students will apply mathematical concepts associated with consumer economics.

Preparation

TEKS Correlations:

This lesson, as published, correlates to the following TEKS. Any changes/alterations to the activities may result in the elimination of any or all of the TEKS listed.

- 120.43 (c)(2)(D)
...critique the methods of credit investigation and concepts related to the use of credit analysis.

Interdisciplinary Correlations:

Economics:

118.2 (c)(11)(A) – Consumers and Credit

...analyze the factors involved in the process of acquiring consumer goods and services including credit, interest, and insurance.

English:

110.xx(6)(A) – Vocabulary Development

...expand vocabulary through wide reading, listening and discussing

110.xx(6)(B) – Vocabulary Development

...rely on context to determine meanings of words...

110.xx(7)(A) – Reading/comprehension

...establish a purpose for reading such as to discover, interpret, and enjoy;

110.xx(7)(I) – Reading/comprehension

...use study strategies such as skimming and scanning, note taking, outlining, and using study-guide questions to better understand texts;

110.xx(7)(J) – Reading/comprehension

...read silently with comprehension for a sustained period of time.

Accommodations for Learning Differences:

It is important that lessons accommodate the needs of every learner. These lessons may be modified to accommodate your students with learning differences by referring to the files found on the [Special Populations page](#) of this website.

Teacher Preparation:

Order free instructor's manual and teacher's guides from the National Endowment for Financial Information (NEFE) High School Financial Planning Program by going to www.nefe.com. Materials will need to be ordered 6 – 8 weeks before class to allow time for shipment, review, and distribution.

Open the Excel spreadsheet and internet websites referenced in PowerPoint to review their uses/application.

References:

1. Banking and Financial Systems (Texas state-adopted textbook)
2. NEFE High School Financial Planning Program
3. Credit-related video at <http://whatsmyscore.org/contest/videos.php>
4. Amortization spreadsheet at <http://office.microsoft.com/en-us/excel/HA010346401033.aspx>
5. Tax, title & license details <http://www.edmunds.com/advice/finance/articles/47280/article.html>
6. Finance calculator reviewing all of the terms introduced in today's lesson at http://www.edmunds.com/apps/calc/CalculatorController?pmtcalAction=basic_calc

Instructional Aids:

1. ***Understanding Your FICO® Score*** published by Fair Isaac Corporation. Found at website http://www.myfico.com/Downloads/Files/myFICO_UYFS_Booklet.pdf
2. NEFE High School Financial Planning Program Teacher's and Student's Guides. Found at website <http://hsfpp.nefe.org/home/> (Free material found through the website. Request early to allow time for material shipment, review, and distribution.)
3. Credit-related video at <http://whatsmyscore.org/contest/videos.php>
4. Amortization spreadsheet at <http://office.microsoft.com/en-us/excel/HA010346401033.aspx>
5. Tax, title & license details <http://www.edmunds.com/advice/finance/articles/47280/article.html>
6. Finance calculator reviewing all of the terms introduced in today's lesson at http://www.edmunds.com/apps/calc/CalculatorController?pmtcalAction=basic_calc
7. PowerPoint presentation
8. Independent Practice Activity – Evaluating Changes in Principal and Answer Key
9. Independent Practice Activity – Evaluating Changes in Interest and Answer Key
10. Independent Practice Activity – Evaluating Changes in Extra Payments and Answer Key
11. Independent Practice Activity – Evaluating Changes in Time and Answer Key
12. Independent Practice Activity – Calculating Tax, Title and License and Answer Key
13. Independent Practice Activity – Car Shopping and Score Sheet
14. Internet

Materials Needed:

1. PowerPoint
2. Handouts – NEFE booklet and ***Understanding Your FICO®***
3. Assignments

Equipment Needed:

1. Computer with Internet access
2. Copier
3. Color printer, if available
4. SmartBoard or Infocus

Learner Preparation:

The teacher will need to distribute copies of the booklet, **NEFE High School Financial Planning Program**, on the day before the class. Students are to read Unit Four, pages 41 – 57, in its entirety.

Students should also review concepts in **Understanding Your FICO®** before the class.

Lesson Plan

Introduction (LSI Quadrant I):

The teacher will lead students in a discussion about car purchase requirements and prepare them for the loan application process.




Important Terms for this Lesson:









- Amortization – The act of paying off ones debt in fixed monthly payments comprised, over time, of increasing principal payments and decreasing interest payments.
- Amortization schedule – A table that displays the amortization of principal and interest.
- Depreciation –The process by which an asset loses value over time due to usage (wear and tear), age, or market conditions.
- Down payment – Cash paid by customer to reduce the amount of the loan
- Insurance – Protection that you purchase from an insurance provider for coverage of risks associated with health, auto, housing, theft, injury, disability, etc.
- Annual Percentage Rate (APR): The APR is the interest rate or the cost of credit.
- Principal * Rate * Time (PRT): Required components of loan calculation.....
- Tax, Title & License (TTL): Expenses that are incorporated in the sales price



Outline

Outline (LSI Quadrant II):










Instructors can use the PowerPoint presentation, slides, handouts, and note pages in conjunction with the following outline.

MI	Outline	Notes to Instructor
 	<p>I. Introduction and Video Video</p> <p>1. The teacher presents a short, attention-getting video to introduce the idea of not overspending, and to lead a discussion of the importance of the credit decision process.</p> 	<p>I. Introduction and Video Video</p> <p>1. Press ctrl while clicking icon. Go to the website below:</p> <p>http://whatsmyscore.org/contest/videos.php</p> <p>Select and view the SECOND PRIZE video.</p>

	2. Review credit reporting.	2. Understanding Your FICO Score , pages 5, and 8 – 12.
 	<p>II. Conduct Self-Evaluation</p> <p>A. Its purpose</p> <ol style="list-style-type: none"> 1. Drive to school 2. Drive to work <p>B. Type of car</p> <ol style="list-style-type: none"> 1. New versus used 2. Car versus truck 3. Expensive or cheap 4. Color 5. Make/model <p>C. Consider how much you can afford (explained in next section)</p> <p>D. Consider other car-related expenses</p> <ol style="list-style-type: none"> 1. Insurance 2. Gas 3. Oil 4. Registration and title 5. Maintenance and repairs 6. Depreciation 	<p>II. Conduct Self-Evaluation</p> <p>A. Consider the primary reasons for the vehicle's use.</p> <p>B. Research the type of vehicle that you desire.</p> <p>C. Reflect on the amount of payment you can afford (see next section).</p> <p>D. Recognize the additional monthly car expenses necessary to care for the vehicle.</p>
  	<p>III. Determine What You Can Afford</p> <p>A. Calculate a car payment</p> <p>B. Estimate additional expenses</p>	<p>III. Determine What You Can Afford</p> <p>A. Evaluate Car Payment</p> <ol style="list-style-type: none"> 1. Utilize EXCEL amortization schedule http://office.microsoft.com/en-us/excel/HA010346401033.aspx 2. Calculate car Tax, Title & License amounts http://www.edmunds.com/advice/finance/articles/47280/article.html <p>B. Understand impact of changes in principal, rate and time http://www.edmunds.com/apps/calculator/CalculatorController?pmtcalAction=basic_calc</p>
  	<p>IV. Assignment Portfolio</p> <p>A. Guided Practice Concept Review</p> <p>B. Independent Practice Car Shopping!</p>	<p>IV. Assignment Portfolio</p> <p>A. Socializing intelligence group activities available in the Assignment Portfolio</p> <p>B. Independent practice activity tied to on-line research at Edmunds.com</p>

		
	V. Closing	V. Closing remarks can be found in the PowerPoint

Copy and paste Multiple Intelligences Graphic in appropriate place in left column.

								
Verbal Linguistic	Logical Mathematical	Visual Spatial	Musical Rhythmic	Bodily Kinesthetic	Intra-Personal	Inter-Personal	Naturalist	Existentialist

Application

Guided Practice (LSI Quadrant III):

The teacher will utilize videos, the internet, and other visuals to describe the financing side of the car loan process, including

1. identifying expenses associated with the purchase (and non-expenses);
2. important financing terms;
3. calculation of TTL;
4. application of amortization schedules; and,
5. fluctuations in monthly payments due to changes in PRT and down payments.

Independent Practice (LSI Quadrant III):

The teacher will distribute a scenario that the student learners will complete individually. After they submit their results, the students will discuss the results with the class.

All responses must be justified when presented back to the learning community.

Summary

Review (LSI Quadrants I and IV):

Q: What are some expense items associated with a car purchase?

A: Examples include car maintenance, gas, insurance, taxes, and car registration

Q: What are non-expense items associated with a car purchase?

A: Examples include warranty and depreciation

Q: What is significant about amortization schedule?

A: The monthly payment remains fixed. The payment is made up of increasing principal payments and decreasing interest payments.

Q: How does a low credit score impact the car purchase?

A: The lower the credit score, the higher the credit risk. As a result, the APR increases resulting in higher interest rate/total interest payment.

Q: What impact does changes in principal, rate and time have on the car purchase process?

A: As the principal or interest rate increases, both the total monthly payments and the total loan increase. As time increases, the total monthly payment decreases however the total loan increases.

Evaluation

Informal Assessment (LSI Quadrant III):

1. Instructor will observe students during Independent Practice assignments, and class participation, during introduction discussion and PowerPoint discussions.
2. Instructor will assist individuals as needed.

Formal Assessment (LSI Quadrant III, IV):

Students will complete an internet-based activity associated with car financing terms – principal, rate, time, and down payment.

Extension/Enrichment (LSI Quadrant IV):

Students can improve their understanding of class content by doing either of the following:

- Receive one-on-one instruction through tutoring sessions
- Access documents on school server to research and review content after class

Evaluating Change in Extra Payments

Student _____

Using the Excel Loan Amortization template, evaluate the impact of extra payments on total interest and the total number of payments. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

1. Loan Amount	\$15,000
Annual Interest Rate	8%
Loan Period in Years	3
Number of Payments Per Year	12
Start Date of Loan	1/1

What is the total number of payments?

What is the total interest?

2. Add an **Optional Extra Payment** on \$25

What is the total Early Payments?

How many fewer payments will be made compared to #1?

What is the total interest?

3. Remove the **Optional Extra Payment** and then add a single extra payment of \$827.12.

What is the total interest?

How many fewer payments will be made compared to #1?

Evaluating Change in Extra Payments Answer Key

Student _____

Using the Excel Loan Amortization template, evaluate the impact of extra payments on total interest and the total number of payments. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

- | | | |
|----|---|------------|
| 1. | _____ (15) Number of Payments | 36 |
| | _____ (15) Total Interest | \$1,921.64 |
| | | |
| 2. | _____ (5) Total Early Payments | 827.12 |
| | _____ (15) Number of Fewer Payments | 2 |
| | _____ (15) Total Interest | \$1,811.81 |
| | | |
| 3. | _____ (15) Number of Fewer Payments | 2 |
| | _____ (15) Total Interest | \$1,709.54 |
| | | |
| 4. | _____ (5) A lump sum payment had the same number of payments, but lower total interest. | |
| | _____ (100) Total Score | |

Evaluating Changes in Interest

Student _____

Using the Excel Loan Amortization template, evaluate the impact of changes in interest on the scheduled payment and total interest. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

1. Loan Amount	\$15,000
Annual Interest Rate	8%
Loan Period in Years	3
Number of Payments Per Year	12
Start Date of Loan	1/1

What is the scheduled payment? _____

What is the total interest?

2. Change the **Annual Interest Rate** to 9%.

What is the scheduled payment? _____

What is the total interest?

3. Change the **Annual Interest Rate** to 10%.

What is the scheduled payment? _____

What is the total interest?

4. Describe the impact of increasing the Annual Interest Rate.

5. What is the cost savings (the difference in total interest) between an 8% loan and the 10% loan?

Evaluating Changes in Interest Answer Key

Student _____

Using the Excel Loan Amortization template, evaluate the impact of changes in the interest on the scheduled payment and total interest. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

- | | | |
|----|--|------------|
| 1. | _____ (15) Scheduled Payment | \$470.05 |
| | _____ (15) Total Interest | \$1,921.64 |
| 2. | _____ (15) Scheduled Payment | \$477.00 |
| | _____ (15) Total Interest | \$2,171.86 |
| 3. | _____ (15) Scheduled Payment | \$484.01 |
| | _____ (15) Total Interest | \$2,424.28 |
| 4. | _____ (5) As APR increases so does total payment and total interest. | |
| 5. | _____ (5) Monthly the difference is \$13.96. Based on total interest for both rates, the difference is \$502.64. | |
| | _____ (100) Total Score | |

Evaluating Changes in Principal

Student _____

Using the Excel Loan Amortization template, evaluate the impact of changes in the principal on the scheduled payment and total interest. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

1. Loan Amount	\$15,000
Annual Interest Rate	8%
Loan Period in Years	3
Number of Payments Per Year	12
Start Date of Loan	1/1

What is the scheduled payment? _____

What is the total interest?

2. Change the **Loan Amount** to \$20,000.

What is the scheduled payment? _____

What is the total interest?

3. Change the **Loan Amount** to \$25,000.

What is the scheduled payment? _____

What is the total interest?

4. Describe the impact of increasing the Loan Amount or Principal.

5. How would a down payment affect the loan amount and interest?

Evaluating Changes in Time

Student _____

Using the Excel Loan Amortization template, evaluate the impact of changes in time on the scheduled payment and total interest. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

1. Loan Amount	\$15,000
Annual Interest Rate	8%
Loan Period in Years	3
Number of Payments Per Year	12
Start Date of Loan	1/1

What is the scheduled payment? _____

What is the total interest?

2. Change the **Loan Period in Years** to 4.

What is the scheduled payment? _____

What is the total interest?

3. Change the **Loan Period in Years** to 5.

What is the scheduled payment? _____

What is the total interest?

4. Describe the impact of increasing the Loan Period in Years.

5. What is the total interest cost savings (the difference in total interest) between a 3 year loan and a 5 year loan?

Evaluating Changes in Time Answer Key

Student _____

Using the Excel Loan Amortization template, evaluate the impact of changes in the interest on the scheduled payment and total interest. To access Excel template, go to **File/New/On My Computer/Templates – Spreadsheet Solutions/Loan Amortization**. Input loan data in the **Enter Values** box.

- | | |
|--|------------|
| 1. _____ (15) Scheduled Payment | \$470.05 |
| _____ (15) Total Interest | \$1,921.64 |
| _____ (15) Total Interest | \$1,921.64 |
| 2. _____ (15) Scheduled Payment | \$366.19 |
| _____ (15) Total Interest | \$2,577.30 |
| 3. _____ (15) Scheduled Payment | \$304.15 |
| _____ (15) Total Interest | \$3,248.75 |
| 4. _____ (5) As the loan period in years increases, the monthly payment decreases and the total interest paid increases. | |
| 5. _____ (5) Based on total interest for both rates, the difference is \$1,327.11. | |
| _____ (100) Total Score | |

<h2 style="margin: 0;">Calculating Tax, Title and License</h2>
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Student _____

Practice calculating tax, title and license for the following new vehicles. Utilize auto finance tips found at

<http://www.edmunds.com/advice/finance/articles/47280/article.html>:

<p>Example Destination Fee 1.5%)</p>	<p>Car 1</p>	<p>\$14,000</p>	<p>Sales Price and Tax (@ .0825 or 8.25%) Title and License (@.015 or Total Car Price</p>
		<p>1,155 <u>210</u></p>	
		<p><u>\$15,365</u></p>	

1. Sales Price and Destination Fee	\$15,000
Taxes at 8.25%	_____
Title and License Fee at 1.5%	_____
Total Car Price	_____

2. Sales Price and Destination Fee	\$20,000
Taxes at 8.25%	_____
Title and License Fee at 1.5%	_____
Total Car Price	_____

3. Sales Price and Destination Fee	\$25,000
Taxes at 8.25%	_____
Title and License Fee at 1.5%	_____
Total Car Price	_____

Calculating Tax, Title and License Answer Key

Student _____

Practice calculating tax, title and license for the following new vehicles. Utilize auto finance tips found at

<http://www.edmunds.com/advice/finance/articles/47280/article.html>:

<p>Example Destination Fee</p>	<p>Car 1</p>	<p>\$14,000</p>	<p>Sales Price and Tax (@ .0825 or 8.25%) Title and License (@.015 or 1.5%)</p>
		<p>1,155</p>	
		<p>210</p>	
		<p><u>\$15,365</u></p>	<p>Total Car Price</p>

- | | | |
|----|----------------------------------|-------------|
| 1. | _____ (12) Taxes | \$1,237.50 |
| | _____ (12) Title and License Fee | 225.00 |
| | _____ (9) Total Car Price | \$16,462.50 |
| | | |
| 2. | _____ (12) Taxes | \$1,650.0 |
| | _____ (12) Title and License Fee | 300.00 |
| | _____ (9) Total Car Price | \$21,950.00 |
| | | |
| 3. | _____ (12) Taxes | \$2,062.50 |
| | _____ (12) Title and License Fee | 375.00 |
| | _____ (10) Total Car Price | \$27,437.50 |
| | _____ (100) Total Score | |

Car Shopping!

Student _____

Practice using a financial calculator and loan amortization spreadsheet to calculate financial data for two new vehicles.

Chris is preparing to purchase his first new car. He can afford a monthly payment of no more than \$300 per month. Using the market interest rate, evaluate financing options that will allow Chris to achieve the optimal monthly payment on a new vehicle. Select any two vehicles below and complete the requested information in the table (an example has been completed for you):

Ford Focus -Honda Civic – Hyundai Accent – Kia Spectra-Mazda3 – Toyota Corolla

1. Utilize the financial calculator at the following website to complete the table below:

http://www.edmunds.com/apps/calc/CalculatorController?pmtcalAction=basic_calc

Notes: Chris does not have a trade-in; and, only certain cars will have cash rebates.

	MAKE/MODEL/YEAR		
	2008 Nissan Versa (Example)		
Vehicle Sales Price	\$14,269		
Sales Tax	\$1,177		
Title and Registration	\$214		
Cash Down Payment	\$1,000		
Market Finance Rate	8.23%		
Loan Term (Months in Multiples of 12)	60		
Total Loan Amount	\$14,660		
My Monthly Payment	\$298.86		

2. Based on the data, which car would you recommend? Describe the basis of your decision.

3. Utilize the amortization table in Excel. Complete the following table.

	MAKE/MODEL/YEAR		
	2008 Nissan Versa (Example)		
Loan Amount (Principal)	\$14,660.00		
Total Interest	\$3,272.10		
Total Due to Bank (Principal + Interest)	\$17,923.10		

4. Chris gets an unanticipated raise before he makes his first payment. He decides to make an extra payment on his car loan monthly in order to reduce the amount of interest to be paid.

	MAKE/MODEL/YEAR		
	2008 Nissan Versa (Example)		
Actual Number of Payments	55		
Total Interest	\$2,953.41		
Savings in Interest Payments (Difference)	\$318.69		

Car Shopping Score Sheet

Student _____

Practice using a financial calculator and loan amortization spreadsheet to calculate financial data for two new vehicles.

Answers will vary based on financial calculator input and results.

1. _____ (54) Three points per each completed cell

2. _____ (4) Car decision

3. _____ (16) Two points per each completed cell

4. _____ (16) Two points per each completed cell

_____ (100) Total Score