Lesson Plan

Text: Financial Algebra
Volume: _____   Chapter: ___5_____
Unit number __1___   Title of unit: Classified Ads
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Short Description (Be sure to include where in your unit this lesson takes place):

Student will learn some of the steps, involved in buying or selling a used car. Student will learn how to calculate the cost of an ad for a used car.
Some states the buyer needs to pay sales tax to the state revenue department. Washington is one of those states.

LESSON PLAN

TEACHER: Teacher Prep/ Lesson Plan

Lesson Objectives:
Students will be able to:
Calculate the cost of classified ads for used cars.
Calculate the sales tax on an automobile.

List of prerequisite skills needed: Multiplication, fraction to decimals, add, and greater/less than or equal.

Vocabulary: sales tax, use tax, domain, piecewise function, split function & cusp

State Standards addressed:
Math: (Math) A1.7D, A1.8A, A1.8B, & A1.8C
A1.7.D Solve an equation involving several variables by expressing one variable in terms of the others.
A1.8.A Analyze a problem situation and represent it mathematically.
A1.8.B Select and apply strategies to solve problems.
A1.8.C Evaluate a solution for reasonableness, verify its accuracy, and interpret the solution in the context of the original problem.
Reading: (Reading)
2.2.2 Apply understanding of complex organizational features of printed text and electronic sources.
2.3.2 Evaluate informational materials, including electronic sources, for effectiveness.
3.2.2 Apply understanding of complex information, including functional documents, to perform a task.
Writing: (Writing)
1.3.1 Revises text, including changing words, sentences, paragraphs, and ideas.
1.5.1 Publishes in formats that are appropriate for specific audiences and purposes.
2.2.1 Demonstrates understanding of different purposes for writing.

Leadership:

1.B.2 Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work

2.D.1 Solve different kinds of non-familiar problems in both conventional and innovative ways

2.D.2 Identify and ask significant questions that clarify various points of view and lead to better solutions

3.A.1 Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts

3.B.3 Assume shared responsibility for collaborative work, and value the individual contributions made by each team member

Teacher Preparation: Worksheet of abbreviations. Have several different newspapers with auto ads. Using the classified ads for used cars, have students create a list of abbreviations. Price list for the different papers for calculating ads and compare one paper to another. Create 3 x 5 cards with the questions color coded by difficulty.

Content Delivery:

Day 1: Group students in pairs have them find 4 car ads in the newspaper. The 4 ads the students will write out the ad and fill in the complete words for the abbreviations. Model: examples 2 & 3. Have the students do the check for understanding for each example

Practice in class, handing out 3 x 5 cards to the pair of students to solve together.

Day 2: Have them write an algebraic equation for their problems and then explain how they solved their problems.

Model: example 1 on calculating sales tax for a used car. Explain the difference between use tax and sales tax.

Practice in class, calculate the full cost of the car including use tax.

Quiz over vocabulary and ad and sales tax calculation.

Instructional Documents *(Please attach any Worksheet, Quiz, Reading Guide, etc)*

Classified Abbreviations			
ac	air conditioning	lthr	leather interior
auto	automatic transmission	p/ant	power antenna
cruise	cruise control	p/locks	power door locks
cd	compact disc player	p/mirrors	power mirrors
cyl	number of cylinders	p/seats	power seats
dr	number of doors	ps	power steering
gps	navigation system	pw	power windows

Assessment Tool used in this Lesson *(scoring method, guide, or rubric)*

Reading classified ads in the newspaper and write out in full text using the abbreviation chart.

Find a picture of a car and write a classified ad and calculate what the ad would cost. Use abbreviations and then again calculate the cost.

Find a car in the newspaper and calculate the sales/use tax.

Reinforcement/Intervention/Extension Activities Students will: 1. Determine how much must be saved each month for the down payment (or the entire car if it is to be purchased with cash.)
2. Determine total cost of car – including use tax

Career Applications *Research the following web sites:*

10 Steps to buying a used car
http://www.edmunds.com/car-buying/10-steps-to-buying-a-used-car.html

WA State Licensing: Use Tax
http://www.dol.wa.gov/vehicleregistration/usetax.html

Should I buy a used car in Washington or Oregon?
http://ask.metafilter.com/34557/Should-I-buy-a-new-car-in-Washington-or-Oregon

You need to buy a car to be able to drive to work.

Name _____ Date _____

Pre-Quiz Chapter 5

1. What is the radius of a circle with a diameter of 18 inches?

2. Josephine drives 420 miles on a trip to Idaho and it took her 7 hours, what are her average miles per hour?

3. Bill purchased at the local Burger King a soda for $1.25, a hamburger for $4.25, and fries for $.75. What is his total bill?

4. In problem 3 Bill could have purchased a complete meal for $6.00 is this greater than or less than the individual prices?

5. On the above purchases would Bill need to pay sales tax?

6. Jose drove for one hour at 55 mph, one hour at 65 mph and one hour at 70 mph what was his average mph?

7. Jeri drives 15.5 miles daily each way to work, how many miles does she drive in 5 work days?

8 solve $5x + 6x + 7x = 36$	9 solve 75% of $980 =$	10 solve $85 * .35 =$
11. solve $5(30-15) + 5^2 =$	12. change from percent to decimals 88%	13. change from decimals to percent 0.345
14. change fraction to decimal $\frac{3}{4}$.	15. change decimal to fraction $.88$	Bonus $5x + 5x = 3x - 28$

Name _____ Date _____

Pre-Quiz Chapter 5   Answer Key

1. What is the radius of a circle with a diameter of 18 inches? 9 inches

2. Josephine drives 420 miles on a trip to Idaho and it took her 7 hours, what are her average miles per hour? 60 mph

3. Bill purchased at the local Burger King a soda for $1.25, a hamburger for $4.25, and fries for $.75. What is his total bill? $6.25

4. In problem 3 Bill could have purchased a complete meal for $6.00 is this greater than or less than the individual prices? Less than

5. On the above purchases would Bill need to pay sales tax? Yes

6. Jose drove for one hour at 55 mph, one hour at 65 mph and one hour at 70 mph what was his average mph? 63.33 mph

7. Jeri drives 15.5 miles daily each way to work, how many miles does she drive in 5 work days? 155 miles a week

8. solve $5x + 6x + 7x = 36$ $18x = 36$ $X = 2$	9. solve 75% of $980 = 735$	10 solve $85 * .35 = 29.75$
11. solve $5(30-15) + 5^2 = 100$	12. change from percent to decimals 88% .88	13. change from decimals to percent .345 34.5%
14. change fraction to decimal ¾ .75	15. change decimal to fraction .88 22/25	Bonus $5x + 5x = 3x – 28$ $X = 4$

Name _____ Date _____

Quiz Chapter 5-1   Classified Ads - Vocabulary

Match the abbreviation to the full text

1-14

Classified Abbreviations			
A	p/locks	leather interior	
B	dr	air conditioning	
C	cd	power antenna	
D	auto	number of cylinders	
E	gps	power door locks	
F	cruise	number of doors	
G	ac	power seats	
H	pw	compact disc player	
I	p/seats	power mirrors	
J	cyl	power steering	
K	p/mirrors	automatic transmission	
L	p/ant	cruise control	
M	lthr	power windows	
N	ps	navigation system	

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Maria purchased a used car for $5,400. The state charges 7% sales tax, plus $48 for license plates. What is the total the car cost her?

Answer Key

1-14

Classified Abbreviations				
A	p/locks	leather interior	m	
B	dr	air conditioning	g	
C	cd	power antenna	l	
D	auto	number of cylinders	j	
E	gps	power door locks	a	
F	cruise	number of doors	b	
G	ac	power seats	n	
H	pw	compact disc player	c	
I	p/seats	power mirrors	k	
J	cyl	power steering	n	
K	p/mirrors	automatic transmission	d	
L	p/ant	cruise control	f	
M	lthr	power windows	h	
N	ps	navigation system	e	

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Maria purchased a used car for $5,400. The state charges 7% sales tax, plus $48 for license plates. What is the total the car cost her?

$5,400.
  378.
   48.
$5,826.

https://wa-appliedmath.org/