

## WAMC Lab: Car Finder Lab

Math Concept(s):

Source / Text: Financial Algebra

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Date: Summer In-service 2013

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### Attach the following documents:

Lab Instructions

Student Handout(s)

Rubric and/or Assessment Tool

### Short Description (Be sure to include where in your instruction this lab takes place):

#### Lab Plan

Lab Title: Car Finder

Prerequisite skills: Internet usage, simple interest calculations, used car priority worksheet and terminology

Lab objective: Find an actual used car for under \$5,000 and how much per month it would cost to buy the car with a loan and to account for additional expenses related to owning a vehicle. Also, how many hours a week a student would need to work making minimum wage in order to afford the monthly expenses of the vehicle they found.

#### Standards:

CCSS-M: A-CED4

1.

Standards for Mathematical Practice: MP.1, MP.4

2.

State Standards addressed (2008 Washington State Mathematics Standards):

3.

Reading:

4.

Writing:

5.

Leadership/21st Century Skills:

<u>21st Century Interdisciplinary themes</u> (Check those that apply to the above activity.)	
<input type="checkbox"/>	Global Awareness <input type="checkbox"/>
<input type="checkbox"/>	Health/Safety Literacy <input type="checkbox"/>
<u>21st Century Skills</u> (Check those that students will demonstrate in the above activity.)	

#### LEARNING AND INNOVATION

##### Creativity and Innovation

- Think Creatively  
 Work Creatively with Others  
 Implement Innovations

##### Critical Thinking and Problem Solving

- Reason Effectively

#### INFORMATION, MEDIA & TECHNOLOGY SKILLS

##### Information Literacy

- Access and Evaluate Information  
 Use and manage Information

##### Media Literacy

- Analyze Media

#### LIFE & CAREER SKILLS

##### Flexibility and Adaptability

- Adapt to Change  
 Be Flexible

##### Initiative and Self-Direction

- Manage Goals and Time  
 Work Independently

#### Productivity and Accountability

- Manage Projects  
 Produce Results

##### Leadership and Responsibility

- Guide and

<input type="checkbox"/>	Use Systems Thinking	<input type="checkbox"/>	Create Media Products	<input checked="" type="checkbox"/>	Be Self-Directed Learners	<input type="checkbox"/>	Lead Others
<input checked="" type="checkbox"/>	Make Judgments and Decisions	<input type="checkbox"/>	<u>Information, Communications and Technology (ICT Literacy)</u>	<input checked="" type="checkbox"/>	<u>Social and Cross-Cultural</u>	<input type="checkbox"/>	Be Responsible to Others
<input checked="" type="checkbox"/>	Solve Problems	<input type="checkbox"/>	Apply Technology Effectively	<input type="checkbox"/>	Interact Effectively with Others	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<u>Communication and Collaboration</u>			<input type="checkbox"/>	Work Effectively in Diverse Teams		
<input checked="" type="checkbox"/>	Communicate Clearly						
<input type="checkbox"/>	Collaborate with Others						

**Teacher Preparation: (What materials and set-up are required for this lab?)**

Materials

- 6. Used car priority worksheets copies for students
- Packet for Car Finder Lab copies for students
- Internet access, calculator

Set-Up Required:

- 7. Make sure website steps have not changed

**Lab Organization Strategies:**

Grouping/Leadership/Presentation Opportunities:

- 8. Students could possible create a presentaiton of their findings and reasons why they made the choices they did

Cooperative Learning:

- Students could help one another navigate the website when haivng trouble

Expectations:

- Students on task, asking for help from teacher or peers as needed

Timeline:

- 1-2 class periods

**Post Lab Follow-Up/conclusions:**

Discuss real world application of learning from lab

- Nearly every person in America will purchase a car and get a loan int heir lifetime

Career Applications

- Finance
- Loan Office
- Banking
- Auto sales

Optional or Extension Activities

- Have students create a presentation of their findings and the car they chose



## Car Finder Lab



**Instructions:** Using the Kelly Blue Book website you are going to find three cars based on what you want in a used car. Use the *Used Car Priority Work Sheet* you filled out previously to help use the car finder tool.

1. Go to the website: <http://www.kbb.com/cars-for-sale/>
2. Choose within 200 miles of Yakima
3. In the price range category: Choose \$0 - \$5,000
4. Select any of the body types you would like.
5. Select Used
6. Choose the years and miles you want in a car (the higher the mileage and the older the car is the cheaper the car usually is, but you will also have to worry about repairs on a car with higher mileage or that is older)
7. Select the following options you want from the categories: (You can select multiple options in each category)
  - Fuel Type
  - Transmission
  - Doors
  - Drive
  - Engine
  - Colors
8. Click on the  button
9. You now have a list of cars that match your criteria sorted by Models. You may have multiple vehicles per model category.
10. Look through your results.  
Click on several of the cars listed to see what they look like.  
Read through the overview and customer reviews. Make sure you take into consideration the items you selected on your *Used Car Priority Work Sheet*

**Next:**

Pick *three* of the cars you have results for and fill in the information on the next page.

Year, Make and Model of Car #1 \_\_\_\_\_

--Under **Model Details from KBB** click on [Specs](#)

What is the MPG? City \_\_\_\_\_/HWY \_\_\_\_\_

Doors: \_\_\_\_\_

Drivetrain: \_\_\_\_\_

Transmission: \_\_\_\_\_

Body Style: \_\_\_\_\_

EPA Class: \_\_\_\_\_

Country of origin: \_\_\_\_\_

Year, Make and Model of Car #2 \_\_\_\_\_

--Under **Vehicle Highlights** click on **see all specs**

What is the MPG? City \_\_\_\_\_/HWY \_\_\_\_\_

Doors: \_\_\_\_\_

Drivetrain: \_\_\_\_\_

Transmission: \_\_\_\_\_

Body Style: \_\_\_\_\_

EPA Class: \_\_\_\_\_

Country of origin: \_\_\_\_\_

Year, Make and Model of Car #3 \_\_\_\_\_

--Under **Vehicle Highlights** click on **see all specs**

What is the MPG? City \_\_\_\_\_/HWY \_\_\_\_\_

Doors: \_\_\_\_\_

Drivetrain: \_\_\_\_\_

Transmission: \_\_\_\_\_

Body Style: \_\_\_\_\_

EPA Class: \_\_\_\_\_

Country of origin: \_\_\_\_\_

Next you are going to narrow it down to two ACTUAL cars that are for sale from your list.

--Write the names down on the Monthly Vehicle Cost list table and the sale price in the table on the next page

Calculating the loan payment

You only have \$500, so you will need to get a loan for the remaining price of the cars you chose. **Show your work** for the following calculations.

1. Calculate your loan amount given your \$500 down payment and record it in the table below.
  
2. Go to <https://www.solaritycu.org/> and find the current loan rate for a used car. Write the loan rate in the table below.
  
3. Calculate the interest you will have to pay on your loan using the simple interest formula. Refer back to Ch. 3-3 as needed. Record your answer in the table below.
  
4. Calculate the total cost your loan. Record your answer in the table below.
  
5. Calculate what your montly payment will be for the car. (\*Hint-the term is 48 months) Record your answer in the table below.

Monthly Cost of the Car

	<u>Car 1--</u>	<u>Car 2--</u>
Sale Price:		
Down Payment:		
Amount Financed (Amount of loan)		
Interest rate:		
Term (Months)	48 months	48 months
Interest Charged		
Total Cost (Amount Financed + Interest)		
Monthly Payment		

Using all the research and calculations you've done, answer the following questions using *complete sentences*.

1. Of the two final cars you selected, choose ONE to buy and give several reasons why you would purchase that car. Make sure to include reasons from your used car priority worksheet in your answer.
2. If you had a part time job that paid \$9.19 an hour (minimum wage) how many hours a week would you need to work to afford the car you chose? —**Show your calculations**
3. What are some other expenses that you would need to consider when owning a car? List at least **3 additional** monthly expenses of owning your own car.
4. Could you realistically get a job and afford a car?—Why or why not.

# GUIDES TO INDEPENDENCE™

## Used-Car Priority Work Sheet

For each characteristic, fill in the quality you're seeking and how important it is to you using this scale:

0 = Not important    1 = Fairly important    2 = Very important    3 = MUST have

Category	Desired features	How important?
<b>Overall</b>		
Type (sedan, pickup, SUV, convertible, compact)		
Manufacturer		
Style (2-dr, 4-dr, hatchback)		
Maximum odometer reading		
Model-year range		
Color		
Body free of dings or dents		
<b>Performance</b>		
Fuel economy (10mpg, 20mpg, 30+mpg)		
Horsepower		
Rated as reliable		
Handles well on highway		
4-wheel drive		
<b>Safety</b>		
Driver air bag		
Passenger/side air bag		
Antilock brakes		
Rated as safe in crash tests		
Daytime running lights		
<b>Interior</b>		
Comfortable seats		
Interior (vinyl, cloth, or leather)		
A/C		
Stereo/sound system		
Comfortable/quiet ride		
<b>Pricing</b>		
Maximum sales price		
Low insurance premiums		
<b>Other</b>		

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