Financial Literacy: Introduction to Purchasing a Car Lesson Plan

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Lesson Background	NRS Levels
This is the first lesson in the series.	Low to High Adult Secondary Education

Recommendations for Direct Instruction
Identified CCRS math standard will be practiced but not directly taught. To make this a math lesson, teacher could add direct instruction of percentage skills.

Project Title	Approximate Instruction Time
Introduction to Purchasing a Car	1 hour and 45 minutes

Instructional Objectives *(written in teacher language primarily derived from content standards and includes evidence of mastery)*:	**Learning Target Statements** *(written in student-friendly language and helps learners reflect on what they are able to do as a result of the project)* for learners' exit tickets, learning logs, or reflection:
By the end of this project, students will be able to: • Discuss car purchasing and ownership, specifically the financial implications. • Practice calculating down payments (percentages) for car purchases.	• I can talk about what I already know about buying and owning a car and what I'd like to know more about. • I can calculate down payment amounts for a new car purchase.

Lesson Area	**Lesson Information**
ELA/Mathematics/ELP Standard(s) Addressed:	**CCR Speaking and Listening Anchor Standards:** SL1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively. SL4: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. SL6: Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate. **CCRS Math Level D** Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent. (6.RP.3c)

Lesson Area	Lesson Information
Central Skills Taught:	☐ Adaptability and Willingness to Learn ☒ Communication ☐ Critical Thinking ☐ Interpersonal Skills ☐ Navigating Systems ☒ Problem Solving ☐ Processing and Analyzing Information ☐ Respecting Differences and Diversity ☐ Self-awareness
Language Demands: (Include academic language, language skills, etc.)	Vocabulary specific to car finances *negotiate, down payment, interest, trade-in* Language useful for politely disagreeing, extending a conversation, and turn-taking: • That's a good point, but have you thought about … • Interesting! • That was not my experience; let me tell you … • What else do you remember about that? • We haven't heard from_____yet; let's give her a chance to contribute. • Hmm, what makes you say that? • Huh, where did you find that information?

Lesson Area	Lesson Information
	• Have you considered …?
Assessing Mastery of the Objective(s) and Central Skills: (Indicate <u>when</u> and <u>how</u> assessment – formative and/or summative - will occur during the project.	**Proof of Learning:** ☒ Via observation of a team task (e.g., discussion, work on project) ☐ Via team self-assessment ☐ Via individual self-assessment ☒ Via team product ☒ Via individual product ☐ Other (Please list): **Proof of Learning Tools:** ☐ Rubric ☐ Checklist ☐ Quiz ☒ Other (Please list): Writing, individual work on percentages **Ongoing Formative Assessment** ☐ Nonverbal responses to comprehension questions (e.g., answer cards, Kahoot!) ☐ Peer-to-peer quizzing ☐ Exit/admit tickets ☒ KWL charts ☐ Other (Please list):

Lesson Area	Lesson Information
Adaptations and/or Accommodations: *(How will you increase access to the content of the project? Identify differentiation strategies.)*	**For lower-level learners:** • Break this lesson into two or three lessons, each addressing one of the objectives above (e.g., discuss car ownership and purchase, calculate down payments on a car purchase). • Teach and practice the essential vocabulary for the lessons, such as *used, new, dealership, down payment, calculate, percentage*, etc. • Supply links and targeted questions for learners during the research portion of the lesson to limit quantity and level of readings and to focus attention on key information. • Read the math activity instructions aloud and model the math work together before having the students work independently. • Teach learners to use the calculators on their smartphones to check calculations. • Allow for adequate think time and "turn-and-talk" time before asking volunteers to share with the group. • Tap into the opening KWL exercise to uncover level of knowledge and confidence about purchasing a car. **For higher-level learners:** • Read the math activity instructions aloud and model the math work together before having the students work independently. • Teach learners to use the calculators on their smartphones to check calculations.

Procedure	Description	Central Skills	Materials
Introduction: How will you introduce the lesson objective and how it fits into the unit/LOI? Identify its relevance to learners' needs and goals. **Timing: 15 minutes**	Show a few photos (flip through on screen, if available) of car dealerships or car purchasing. Make sure the photos vary in context (new and luxurious, used and respectable, used and dingy, a simple "for sale" sign on a personal car in a yard, an online car marketplace site, etc.). Ask students what they see in these photos. Write down the contexts on the board for purchasing vehicles as they name them (dealership, used car lot, private party, auction, online [e.g., CarsDirect.com]). Once they have briefly shared general observations on these purchasing contexts, initiate and facilitate a discussion (first in small groups of three or four, then as a large group) about the various options available when buying a new or used car. Invite learners to share what they like or do not like about each option, whether for monetary or nonmonetary reasons. Provide the sentence frames below on a screen or sheet for students to use as they talk with peers. First, allow the room to be quiet and let students think on their own for a couple of minutes to prepare their thoughts. • The best way to buy a car is _____. • You shouldn't buy a car at _____ because _____.	• Communication • Interpersonal Skills • Navigating Systems • Respecting Differences and Diversity • Self-awareness	• Note paper or a prepared KWL chart • Down Payment Math Activity handout (Appendix B) • Screen, board, devices, internet • Calculators (on phone is fine)

Procedure	Description	Central Skills	Materials
	• The great thing about buying a used car _____ , but a potential problem could be _____. • When it comes to buying a car, I wish I knew more about _____. • One thing I know for sure about buying a car is _____. After they have had a couple of minutes to think quietly and before the discussion begins, refer students to phrases generated and practiced in previous classes around politely disagreeing, extending a conversation, and turn-taking. Elicit or remind them of these helpful phrases: That's a good point, but have you thought about …? Interesting! That was not my experience; let me tell you … What else do you remember about that? We haven't heard from _____ yet; let's give her a chance to contribute. Hmm, what makes you say that? Have you considered …? Assign one person in the group to be the monitor (to make sure everyone contributes and to move through the sentence prompts when needed), and assign another to be the timekeeper. Allow group discussion to continue for several minutes, as long as it is productive, and circulate to identify who is fairly new to the topic and who has a lot of knowledge about car buying and owning.		

Procedure	Description	Central Skills	Materials
	Bring the whole group back together and ask volunteers to share in one or two words how they feel about past car-buying experiences. (Optional: Ask for volunteers with particularly colorful stories to share a bit more about their car-buying experiences. These stories might be referenced later as relevant examples.) Point out that regardless of where they look for a car to buy, investigating car costs in advance can help narrow down purchase options and reduce the risk of surprise (or buyer's remorse) when negotiating the purchase price. That's what the students will be working on in the next few classes in the unit on car purchasing and owning. This lesson focuses on just one aspect of car buying: calculating a down payment. Now that they have shared orally with their classmates what they know, assume, and would like to know about car buying, allow a few minutes for the students to independently complete a KWL exercise (the first two columns; the "learn" one comes later) in which they write what they know about car buying and in particular what they want to know about the financial aspects of buying and owning a car. Throughout lesson, build on what students already know to address what they want to learn.		

Procedure	Description	Central Skills	Materials
	What I already know about buying a car: **What I'd like to know about buying a car:** **What I've learned about car purchasing:**		
Explanation and Modeling: *What type of direct instruction do learners need? Are there ways for learners to access the new content independently? What types of models will you provide and when?* **Timing: 20 minutes**	Direct learners to hold on to their KWL charts as they will add to the final column later in the lesson or unit. Tell students that you will focus next on the financial side of buying a car. Ask, "What should we keep in mind when purchasing? Are there any terms we need to know?" (Call on those who have purchased a car before to share their insights briefly). Elicit terms: *down payment range*, *loan limits*, *cash*, *trade-in value*, *taxes*, *fees*. Teach these words as needed, particularly *down payment range* and *loan limits*. Car-Buying Guidelines Ask students what they think are some guidelines for car buying -- not guidelines regarding the car itself but guidelines for PAYING for a car. Ask them to find information about down payment range and loan limits. (Teach these terms if they are unfamiliar.) Give teams of two or three people 10 minutes to search online on their own or a school	• Communication • Navigating Systems • Problem Solving	• Laptop for every small group • Internet access

Procedure	Description	Central Skills	Materials
	device (provide one or two credible websites if a group appears to be struggling) to see what they can find about guidelines or rules of thumb related to purchasing a car. Bring the group together for the teams to share what they discovered. Reasonable responses to this internet search: • The car down payment range is 10% to 20%. • The monthly loan payment should be less than 15% of monthly take-home pay. • The car purchase price should be 10% to 15% of annual gross income or less. Tell students that the class will now work on figuring out down payments and practice doing the math.		
Guided Practice: *Which tasks and learning activities will you use to engage learners with the content and skills? How will you structure the tasks or other learning activities to support learners' success?*	Acknowledge that cars are expensive. Questions to ask when buying a car include these: "How can we pay for it?" "How much do we need up front as a down payment if we need a loan?" "Can we trade in our old car?" Also acknowledge that buying a car by paying all cash or by borrowing money is an individual choice. When borrowing, an individual has new choices, such as where to borrow from (e.g., dealership, bank or credit union, another person), how much to borrow, and for how long to borrow.	• Communication • Navigating Systems	• Laptop for every small group • Internet access • Projector or board • Teaching Tips (Appendix A)

Procedure	Description	Central Skills	Materials
Timing: 20 minutes	Tell students that you will start with a basic down payment calculation, then add in trade-in value, and finally do an example with an online calculator. Work through one example on the board or screen for each type of calculation the students will be doing when they work on the handout: **With 20% down payment:** Calculate 20% down payment amounts. Sample: $30,000 car price x .2 (20%) = $6,000 down payment Ask if any students remember the percentages they paid in the past. Ask if any students have lessons learned to share about down payments. Refer to Teaching Tip #1 (Appendix A) for more background information on the concept of "down payment" that can be shared with students. **With trade-in:** Calculate 20% down payment amounts, then subtract trade-in value to determine the amount of cash needed at the time of sale. Sample: $30,000 car price x .2 (20%) = $6,000 down payment. $6,000 – $2,000 trade-in = $4,000, which is the amount of cash needed to complete the sale. Ask if any students have experiences to share about trade-ins.		

Procedure	Description	Central Skills	Materials
	Refer to Teaching Tip #2 (Appendix A) for more background information on trade-ins that can be shared with the students. **Loan amount and monthly payment:** Use an online calculator to determine loan amounts and payments. Calculators: www.kbb.com (research tools), www.BankRate.com (loans) Sample: $30,000 loan x .04 (4%) x 5 years (60 months) = $552 payment. $33,150 total paid over 5 years - $30,000 borrowed principal = $3,150 interest.		
Application/Extended Practice: *What will learners do to demonstrate their acquisition of content knowledge, basic skills, and key soft skills?* **Timing: 30 minutes**	Distribute the Down Payment Math handout (Appendix B). Guide individuals or pairs to work through each batch of math problems. Students can work independently or with a partner. Guide them as makes sense given their comfort with the math. • Read the instructions for each group, and define any unfamiliar terms. • Allow time for students to calculate and compare answers with a partner. • Have them share results. Use the Down Payment Math Activity – Answer Key handout (Appendix C). Note that answers are rounded to the closest whole dollar for the "Loan Amount and Monthly Payment" activity.	• Communication • Critical Thinking • Navigating Systems • Problem Solving	• Down Payment Math Activity handout (Appendix B) • Down Payment Math Activity – Answer Key handout (Appendix C)

Procedure	Description	Central Skills	Materials
	• Have the students consider which is the better loan deal independently or with a partner and be prepared to share their answers. Ask: Given the same borrowed amount and interest rate, which do you think is better, having a longer loan with lower monthly payments or a shorter loan with higher payments? What factors impacted your response? (Sample responses: The longer loan will incur more interest costs. But lower monthly payments might be a preference for someone on a very tight budget.) Ask: How significant is the amount of interest paid over the four or five years? Refer to Teaching Tip #3 (Appendix A) for more background information on the concept of "interest rates" that can be shared with students.		

Procedure	Description	Central Skills	Materials
Student Reflection on Learning Targets, Closure, and Connection to Future Learning **Timing: 20 minutes**	Since students have been seated awhile, have them stand up and move around the room in an informal two-question mingle: 1. What's your personal experience with down payments and interest rates? 2. If you had a LOT of money and needed no loan, what kind of car would you like to buy?	• Communication • Interpersonal Skills • Respecting Differences and Diversity	

	To close the lesson, have students revisit their KWL charts and complete the third column. What did they learn about purchasing a car today? If time allows, have a few students share a word or two about what they are taking away from today's class. Mention the following site for those curious about how much their current car is worth for trade-in: www.kbb.com. Students who use the site should tell the class what their cars are worth tomorrow! Preview upcoming lessons on ongoing costs of car ownership, making decisions about a new car, and negotiating prices with sellers.		

Appendix A: Teaching Tips

Teaching Tip #1

It can benefit a buyer to know in advance the amount available for a down payment but not to reveal intentions regarding a down payment until a selling price has been agreed to. The down payment amount will vary based on several factors, including how much the borrower has on hand and the amount the buyer can afford to borrow and repay in a reasonable time. Because new cars lose significant value the first year of ownership (the estimated decline is near 20%), it seems prudent to down pay close to 20% to avoid owing more than the vehicle will be worth. If a car is wrecked or stolen during the first year, insurance payout for the value of the car might be less than the loan amount that will need to be paid.

Teaching Tip #2

Some people might consider having a car with a trade-in value similar to having money in the bank. Although car guides (such as *Kelley Blue Book*) factor type, age, mileage, condition, and demand when estimating a car's value, the actual value is what both parties (seller and buyer) agree to for the transaction.

When shopping for (or selling) a car, knowing the value of one's car gives leverage when negotiating a final price. Encourage learners to go online to www.kbb.com to estimate the value of a used car (from the case studies or their own auto). Rather than trade in an older car at the dealership, a consumer might receive a better price by selling the vehicle privately and then applying the cash received toward a down payment.

Teaching Tip #3

Consumers need to read the fine print in ads because actual interest rates will vary due to factors such as length of loan and the buyer's credit record. Consumers with good credit records might be offered lower interest rates. Investigating interest rate options available from more than one source provides reference when negotiating purchase terms with a seller. If it would be a better deal, a buyer might choose to get an auto loan from a source other than the dealership where the car is purchased. When deciding on length of the loan, think ahead to the value of the vehicle. Three to five years makes sense for a car loan rather than eight years, for with an eight-year loan, the car value could be less than the loan payments made in a year.

The simple interest rate formula does not apply to auto loans when calculating interest. These types of loans are amortized over time, meaning that as the principal amount of a loan decreases due to payments, the amount of interest also decreases with each payment. The total loan repayment amount is typically averaged into equal monthly payments.

Teaching Tip #4

Preparing before meeting with a salesperson includes anticipating costs, knowing what is affordable, and establishing criteria for vehicle type and car condition quality. Having clarity about personal preferences and criteria for a satisfactory outcome can give the consumer confidence to advocate for his or her own best interests and reduce the risk of buyer's remorse. A salesperson can be expected to be more concerned about closing a sale than about getting the consumer in the right car at an affordable price.

Buyers may need to give themselves permission to say "no" and walk away rather than compromise, especially on their most important criteria, such as financial limits or product quality expectations.

Appendix B. Down Payment Math Activity

20% Down Payment

For each car purchase below, what amount of cash is needed for a 20% down payment?

Calculating the 20% Down Payment on a Car

Item	Car #1	Car #2	Car #3
Car Price	$18,000	$23,450	$37,000
20% down payment			

With Trade-in

The trade-in value for an old car will be used as some or all of the down payment to buy a new car. After subtracting the trade-in value, how much cash will need to be paid (if any) to total a 20 percent total down payment?

Calculating the Down Payment after Trade – In Value

Item	Car #4	Car #5	Car #6
Car price	$18,000	$23,450	$37,000
20% down payment			
Trade-in Value	$1,000	$4,000	$8,500
Additional cash needed for 20% don payment after trade - in value is subtracted			

Loan Amount and Monthly Payment

Use an online auto loan calculator to find the total loan amount and the monthly payment for each scenario.

Item	Car #7	Car #8	Car #9
Loan amount	$19,000	$19,000	$19,000
Interest Rate	3.75%	5%	5%
Number of years/months	4 years (_____ months)	4 years (_____ months)	5 years (_____ months)
Monthly Payment			
Total Loan Amount			
Total Interest Amount			

Appendix C. Down Payment Math Activity – Answer Key

20% Down Payment

For each car purchase below, what amount of cash is needed for a 20% down payment?

Item	Car #1	Car #2	Car #3
Car Price	$18,000	$23,450	$37,000
20% down payment	$3600	$4,690	$7,400

With Trade-In

The trade-in value for an old car will be used as some or all of the down payment to buy a new car. After subtracting the trade-in value, how much cash will need to be paid (if any) to complete a 20% down payment?

Item	Car #4	Car #5	Car #6
Car price	$18,000	$23,450	$37,000
20% down payment	$3600	$4,690	$7,400
Minus Trade-in Value	-$1,000	-$4,000	-$8,500
Additional cash needed for 20% down payment after trade -in value is subtracted	$2,600	$690	$0 (trade-in exceeds 20% down payment)

Loan Amount and Monthly Payment

Use an online auto loan calculator to find the total loan amount and the monthly payment for each scenario.

Item	Car #7	Car #8	Car #9
Loan amount	$19,000	$19,000	$19,000
Interest Rate	3.75%	5%	5%
Number of years/months	4 years (48 months)	4 years (48 months)	5 years (60 months)
Monthly Payment	$427	$438	$359
Total Loan Amount	$20,490	$21,003	$21,513
Total Interest Amount	$1,490	$2,003	$2,513