Lesson 9.1: Transportation Options

Standards and Benchmarks

See page 5.

Lesson Description

In this lesson, students will learn about different transportation options and the costs and benefits associated with them. They will also research different kinds of cars and what they can afford given different financial scenarios. To obtain answer keys for the handouts and assessment in this lesson, create an account on FederalReserveEducation.org.

Concepts

20-10 Rule
Costs and Benefits
Decision Making

Objectives

Students will be able to:

- identify the costs and benefits of transportation alternatives.
- list the criteria for making decisions related to owning a car.
- research vehicle options within their budget.
- decide how much they can afford to pay for a car and stay within their budget.

Compelling Question

What criteria are used when choosing a transportation alternative?

Time Required

45 minutes

Materials

- Handout 9.1.1: Transportation Alternatives – Costs and Benefits, one copy for each student
- Handout 9.1.2: Car Decision Guide, one copy for each student
- Handout 9.1.3: What Car Can I Afford?, one copy for each student
- Handout 9.1.4: Auto Loan Scenarios, cut apart, one card for each pair of students
- Lesson 9.1 Slides, one copy for teacher
- Video: "Cost Effective Ways to Get Around Urban Areas": https://ceeeatud.radioamerica.org/2018/10/02/cost-effective-ways-to-get-around-urban-areas/
- Calculators
- Internet Access

Procedure

1. Begin the lesson by asking students what kind of transportation options they use. (*Answers will vary, but students may mention someone driving them, ride share, buses, driving themselves, etc.*)

2. Distribute one copy of Handout 9.1.1: Transportation Alternatives—Costs and Benefits to each student.

3. Tell students they are going to watch a video, "Cost- Effective Ways to Get Around Urban Areas." They should note some costs and benefits of each transportation alternative presented in the video on Handout 9.1.1.

4. Show the video, "Cost-Effective Ways to Get Around Urban Areas at https://ceeeatud.radioamerica.org/2018/10/02/cost-effective-ways-to-get-around-urban-areas/

5. Review the answers to Handout 9.1.1 with students.

    a. Answers can be found in the Answer Key to the lesson.

6. Explain to students that cars are among one of the most popular transportation alternatives.

7. Ask students what kind of cars they would like to drive? (*Answers will vary depending on students' tastes and preferences.*)

8. Then, ask students what kind of cars they think they might be able to afford while they are still in high school. (*Answers will vary, but students may mention used cars or less expensive cars.*)

9. Distribute a copy of Handout 9.1.2: Car Decision Guide to each student.

10. Tell students to navigate to https://www.kbb.com/ (Kelly Blue Book) and research three different cars they are interested in in their current affordability range.

11. Instruct students to complete Handout 9.1.2 using their own criteria for cars.

12. Display Slide 1. Explain to students that in this lesson, they will discover what cars they might like to own as well as what they can afford.

13. Display Slide 2: How Much Can You Afford? Explain the 20-10 Rule to students: Try not to borrow more than 20% of your yearly net income; monthly payments shouldn't be more than 10% of your monthly net income.

14. Give each student a copy of Handout 9.1.3: What Car Can I Afford?. Explain that students will be first looking at how much car they can afford in different scenarios, applying the 20/10 rule.

15. Navigate to the Auto Affordability Calculator at https://www.consumercredit.com/debt-resources-tools/financial-calculators/vehicle-ownership/how-much-car-can-you-afford/

    a. Explain to students that they will be using a financial calculator provided by American Consumer Credit Counseling, Inc.

    b. Do Scenario 1 together as an example, using $150 per month as the highest monthly payment.

    NOTE: You may need to tell students to scroll through the page to reach the calculator. You might want to review this before class to familiarize yourself with how the calculator works. Auto loan rates vary depending on credit scores. Bankrate provides an overview of current auto loan rates here: Auto Loan Rates & Financing in 2026 | Bankrate. Use the current average rate of 6.9% (this is subject to change!)

16. Put students in pairs to work on Scenarios 2 and 3. Give each pair one card from Handout 9.1.4: Auto Loan Scenarios. These cards will have information on that with salaries, down payment, trade-in value, loan term, and interest rates.

17. Remind students that to find the highest monthly payment, they should use the 20-10 rule (Borrow 20% of your yearly net income; monthly payments shouldn't be more than 10% of your monthly net income).

    a. They should also just assume 0% sales tax for the exercise and no vehicle rebates.

18. Have students complete the remaining scenarios on Handout 9.1.3 in pairs.

19. Have some volunteer students share their answers. Have students pay attention to how different scenarios affect how much car they can afford.

Closure

20. Review the important points of the lesson by discussing the following:

    a. What criteria will you use when choosing a transportation alternative? (*Costs, convenience, efficiency*).

    b. How does the 20-10 rule help you consider how much you can afford to borrow? (*It tells you to try not to borrow more than 20 percent of your yearly next income and make sure your monthly payment do not exceed 10 percent of your monthly net income.*)

    c. What criteria will you use when choosing a car? (*Answers will vary.*)

d. How do you know what type of vehicle you can afford? (*Answers will vary but may include information on income level, down payment amount, interest rate, etc.*)

Assessment

21. Using the information provided, decide whether it is wise for Andrew to purchase the following vehicle. Explain why or why not. Allow the students to use the American Consumer Credit Counseling How Much Car Can I Afford online calculator at https://www.consumercredit.com/debt-resources-tools/financial-calculators/vehicle-ownership/how-much-car-can-you-afford/

    a. The vehicle is a 2026 hybrid sedan priced at $28,000
    b. The highest monthly payment Andrew can afford is $400.
    c. He has no money saved for a down payment.
    d. He does have a ten-year-old sedan that he can trade-in and has determined that the trade-in has a value of $5,000.
    e. His bank is running a special auto loan with the following terms: 5-year loan at 6.0% APR (interest rate).
    f. Andrew lives in the suburbs in a large metropolitan area.

Standards and Benchmarks

National Standards for Personal Financial Education

Standard 2: Spending

A budget is a plan for allocating a person's spendable income to necessary and desired goods and services. When there is sufficient money in their budget, people may decide to give money to others, save, or invest to achieve future goals. People can often improve their financial well-being by making well-informed spending decisions, which includes critical evaluation of price, quality, product information, and method of payment. Individual spending decisions may be influenced by financial constraints, personal preferences, unique needs, peers, and advertising

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2. Consumer decisions are influenced by the price of products or services, the price of alternatives, the consumer's budget and preferences, and potential impact on the environment, society, and economy.

3. When purchasing a good that is expected to be used for a long time, consumers consider the product's durability, maintenance costs, and various product features.

Handout 9.1.1: Transportation Alternatives – Costs and Benefits

Transportation Alternative	Costs	Benefits
Subway		
Bus		
Car		
Taxi		
Ride Share		

Handout 9.1.2: Car Decision-Making Guide

Alternatives / Criteria	#1	#2	#3	#4	Total
#1					
#2					
#3					

My Car Choice: _____

Handout 9.1.3: What Car Can I Afford? (Page 1 of 2)

Directions:

- Use the auto affordability calculators at https://www.consumercredit.com/debt-resources-tools/financial-calculators/vehicle-ownership/how-much-car-can-you-afford/ to complete this exercise.
- Complete the tables for the following scenarios. Remember the 20-10 rule.
- Always assume your sales tax is 0%.

EXAMPLE: Scenario 1: You can afford $150 per month to pay for a car. What is the most expensive car you can afford? Assume your down payment is $1000, your loan term is 60 months (5 years), you are not trading in a car, and your sales tax is 0%.

Highest monthly payment with which you are comfortable	$150
Down Payment	$1000
Trade-In	$0
Loan Term (in months)	60 months (5 years)
Interest Rate	
Most Expensive Car I Can Afford	

Scenario 2: Using the information given to you on your Auto Loan Scenario card, how much car can you afford? Assume 0% sales tax and no vehicle rebates.

Highest monthly payment with which you are comfortable	
Down Payment	
Trade-In	
Loan Term (in months)	
Interest Rate	
Most Expensive Car I Can Afford	

Handout 9.1.3: What Car Can I Afford? (Page 2 of 2)

Scenario 3: Determine how much can afford with 1.5 times as much for the monthly payment in Scenario 2. Assume 0% sales tax and no vehicle rebates.

Highest monthly payment with which you are comfortable	
Down Payment	
Trade-In	
Loan Term (in months)	
Interest Rate	
Most Expensive Car I Can Afford	

Handout 9.1.4: Auto Loan Scenarios (Page 1 of 2)

Yearly Net Income: $45,000 **Down Payment:** $2,000 **Trade In:** $1,500 **Loan Term:** 3 years **Interest Rate:** 6.5%	**Yearly Net Income:** $52,000 **Down Payment:** $3,500 **Trade In:** $2,000 **Loan Term:** 4 years **Interest Rate:** 7.2%
Yearly Net Income: $38,000 **Down Payment:** $1,000 **Trade In:** $500 **Loan Term:** 9 years **Interest Rate:** 9.8%	**Yearly Net Income:** $65,000 **Down Payment:** $4,000 **Trade In:** $3,000 **Loan Term:** 2 years **Interest Rate:** 5.5%
Yearly Net Income: $41,000 **Down Payment:** $4,000 **Trade In:** $3,000 **Loan Term:** 2 years **Interest Rate:** 8.5%	**Yearly Net Income:** $92,000 **Down Payment:** $4,500 **Trade In:** $3,500 **Loan Term:** 3 years **Interest Rate:** 4.5%
Yearly Net Income: $58,000 **Down Payment:** $2,500 **Trade In:** $2,500 **Loan Term:** 3 years **Interest Rate:** 6.9%	**Yearly Net Income:** $115,000 **Down Payment:** $4,800 **Trade In:** $4,500 **Loan Term:** 1 year **Interest Rate:** 4.8%
Yearly Net Income: $43,000 **Down Payment:** $1,200 **Trade In:** $800 **Loan Term:** 5 years **Interest Rate:** 10.5%	**Yearly Net Income:** $61,000 **Down Payment:** $3,200 **Trade In:** $2,600 **Loan Term:** 4 years **Interest Rate:** 6.8%
Yearly Net Income: $33,000 **Down Payment:** $500 **Trade In:** $0 **Loan Term:** 5 years **Interest Rate:** 12.0%	**Yearly Net Income:** $98,000 **Down Payment:** $4,200 **Trade In:** $3,800 **Loan Term:** 4 years **Interest Rate:** 5.2%

Handout 9.1.4: Auto Loan Scenarios (Page 2 of 2)

Yearly Net Income: $46,000 **Down Payment:** $1,800 **Trade In:** $1,400 **Loan Term:** 4 years **Interest Rate:** 8.8%	**Yearly Net Income:** $55,000 **Down Payment:** $2,800 **Trade In:** $2,200 **Loan Term:** 3 years **Interest Rate:** 7.5%
Yearly Net Income: $89,000 **Down Payment:** $3,600 **Trade In:** $3,200 **Loan Term:** 2 years **Interest Rate:** 6.2%	**Yearly Net Income:** $50,000 **Down Payment:** $2,200 **Trade In:** $1,800 **Loan Term:** 3 years **Interest Rate:** 7.9%