

WAMC Lab Template

Math Concept(s): Loans 3-2

Source / Text: Financial Algebra

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Attach the following documents:

- Lab Instructions

Students will “shop” for a new car. They will use their potential income and budget from previous assignment to determine how much they can afford. Students will walk around the classroom and shop for a new car. Ideally, students would shop for cars in the parking lot. This will allow them to feel the temptation of going over budget.

The price of the vehicles will not be revealed until they return to the classroom. As a group, research cars on Kelly Blue Book website.

Introduce the concept of interest. Use chart on page 159 in Financial Algebra text. Once they have the price and understand interest, they need to fill out a loan application. Applications will be processed by teacher. Applications may be sent back requesting more information, a larger down payment or denied completely.

- Student Handout(s)

Potential income/budget

Loan application

- Rubric and/or Assessment Tool

Students will do a prewrite about what kind of car they believe they will find and what they expect to pay.

At the end of the lab, students will write about what they learned.

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

This lab will be the first activity to introduce consumer credit. The lab will take place in the school parking lot and classroom.

Lab Plan

Lab Title: Loan payment

Prerequisite skills: Basic math skills

Lab objective: Understand the process and realistic cost of purchasing a car.

Standards: (Note SPECIFIC relationship to Science, Technology, and/or Engineering)

Mathematics K–12 Learning Standards:

- CCSS.MATH.CONTENT.HSA.REI.A.1

Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.

- CCSS.MATH.CONTENT.HSA.SSE.B.3

Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

Standards for Mathematical Practice:

[CCSS.MATH.PRACTICE.MP1](#) Make sense of problems and persevere in solving them.

[CCSS.MATH.PRACTICE.MP4](#) Model with mathematics.

[CCSS.MATH.PRACTICE.MP5](#) Use appropriate tools strategically.

[CCSS.MATH.PRACTICE.MP7](#) Look for and make use of structure.

K-12 Learning Standards-ELA (Reading, Writing, Speaking & Listening):

Key Ideas and Details:

[CCSS.ELA-LITERACY.RI.11-12.1](#)

Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

[CCSS.ELA-LITERACY.RI.11-12.2](#)

Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

[CCSS.ELA-LITERACY.RI.11-12.3](#)

Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

[CCSS.ELA-LITERACY.W.11-12.1](#)

Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

[CCSS.ELA-LITERACY.SL.11-12.1.A](#)

Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas

K-12 Science Standards

Technology

Computer

Calculator

Engineering

Leadership/21st Century Skills:

21st Century Interdisciplinary themes (Check those that apply to the above activity.)

- Global Awareness
- Financial/Economic/Business/Entrepreneurial Literacy Civic Literacy
- Health/Safety Literacy Environmental Literacy

21st Century Skills (Check those that students will demonstrate in the above activity.)

LEARNING AND INNOVATION

Creativity and Innovation
x Think Creatively

INFORMATION, MEDIA & TECHNOLOGY SKILLS
Information Literacy

LIFE & CAREER SKILLS
Flexibility and Adaptability

Productivity and Accountability
 Manage

<input type="checkbox"/> Work Creatively with Others	<input type="checkbox"/> Access and Evaluate Information	<input type="checkbox"/> Adapt to Change	Projects
<input type="checkbox"/> Implement Innovations	<input type="checkbox"/> Use and manage Information	<input checked="" type="checkbox"/> Be Flexible	<input type="checkbox"/> Produce Results
<u>Critical Thinking and Problem Solving</u>	<u>Media Literacy</u>	<u>Initiative and Self-Direction</u>	<u>Leadership and Responsibility</u>
<input checked="" type="checkbox"/> Reason Effectively	<input type="checkbox"/> Analyze Media	<input type="checkbox"/> Manage Goals and Time	<input type="checkbox"/> Guide and Lead Others
<input type="checkbox"/> Use Systems Thinking	<input type="checkbox"/> Create Media Products	<input checked="" type="checkbox"/> Work Independently	<input type="checkbox"/> Be Responsible to Others
<input checked="" type="checkbox"/> Make Judgments and Decisions	<u>Information, Communications and Technology (ICT Literacy)</u>	<input type="checkbox"/> Be Self-Directed Learners	
<input checked="" type="checkbox"/> Solve Problems	<input type="checkbox"/> Apply Technology Effectively	<u>Social and Cross-Cultural</u>	
<u>Communication and Collaboration</u>		<input type="checkbox"/> Interact Effectively with Others	
<input checked="" type="checkbox"/> Communicate Clearly		<input type="checkbox"/> Work Effectively in Diverse Teams	
<input checked="" type="checkbox"/> Collaborate with Others			

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

Materials

- Loan forms
- Interest charts
- Cars-pictures /cost
- Calculator

Set-Up Required:

- Ask staff members to use their cars
- Research car prices
- Know current interest rates

Lab Organization Strategies:

Plan at least a week ahead of time
Have all forms and research done

Leadership (Connect to 21st Century Skills selected):

Reason Effectively-consider practicalities of car and loan
Make Judgments and Decisions-choosing an appropriate car not something they cannot afford
Solve Problems-Navigating Kelly blue book website, filling out loan application, calculating budget
Communication and Collaboration-negotiating with the lender
Communicate Clearly-Fill out application correctly, negotiate with lender
Collaborate with Others-work with peer to make purchase, application and loan decisions
Be Flexible-willing to consider a different car-saving
Work Independently-research car and fill out forms

Cooperative Learning:

- Shopping for cars
- Research car price
- Complete loan payments

Expectations:

Every student will shop for a car and complete application

Timeline:

One to two days

Post Lab Follow-Up/Conclusions:

Discuss real world application of learning from lab

- Cost of interest
- Loan process
- Budget
- Credit report

Career Applications

- Accounting
- Car sells
- Banking

Optional or Extension Activities

- Follow up with credit lesson
- Connect to first lesson

Washington Applied Math Council

<https://wa-appliedmath.org/>