

WAMC Lab Template

Math Concept(s):

Source / Text: Financial Algebra

Developed by: Dana Lybeck E-Mail: lybeck.dana@yakimaschools.org Date: Summer Conference 2018

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):

- Students will calculate the cost of moving out on their own. In this lab the students are just making a list of items and prices of what they will need in their first apartment for every room.

Lab Plan

Lab Title: My First Apartment \$\$\$

Prerequisite skills: Students can use the internet to search for prices on a variety of merchandise. Students will discuss where they should shop to get the best prices. Students can work as a team member and articulate ideas. Students can use technology to create a spreadsheet or list including prices and totals.

Lab objective: Students will have a realistic idea of what will be needed and the cost of setting up house.

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

Mathematics K–12 Learning Standards:

Standards for Mathematical Practice: Make sense of problems and persevere in solving them.

Practice 1: Make sense of problems and persevere in solving them. Practice 2: Reason abstractly and quantitatively.

Practice 5: Use appropriate tools strategically.

Practice 6: Attend to precision.

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

- RST.9-10.7

K-12 Science Standards

-

Technology

- Students can use the internet to look up items and prices at multiple stores. Students will use word or excel to create a report on items needed (could include items wanted).

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

- Think Creatively
 Work Creatively with Others
 Implement Innovations

Critical Thinking and Problem Solving

- Reason Effectively
 Use Systems Thinking
 Make Judgments and Decisions
 Solve Problems

Communication and Collaboration

- Communicate Clearly
 Collaborate with Others

INFORMATION, MEDIA & TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
 Use and manage Information

Media Literacy

- Analyze Media
 Create Media Products

Information, Communications and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE & CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change
 Be Flexible

Initiative and Self-Direction

- Manage Goals and Time
 Work Independently
 Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with Others
 Work Effectively in Diverse Teams

Productivity and Accountability

- Manage Projects
 Produce Results

Leadership and Responsibility

- Guide and Lead Others
xL3 Be Responsible to Others

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

Materials

- Laptops with internet access, newspapers, paper, pencil

Set-Up Required:

- Groups of two or three

Lab Organization Strategies:

Leadership (Connect to 21st Century Skills selected):

- Group selection

Cooperative Learning:

- Have diverse groups

Expectations:

Students will work politely with each other to create a list by room of necessities to live independently.

Timeline:

- 3 - 4 days

Post Lab Follow-Up/Conclusions:

Discuss real world application of learning from lab

- Students can present their lists and their total calculations.

Career Applications

- When they recognize the cost of living, they may rethink their career choice.

Optional or Extension Activities

- Look online for lists already prepared by experts and compare what they are missing.
- Ask parents, grandparents, other family and friends if they have any furniture or old house wares they would share.
- Goodwill shopping?? Do you mind using a strangers hand me downs?

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WAMC Lesson Plan

Name(s): Dana Lybeck

Email Address: dlybeck03@gmail.com

Lesson Title: 7-1 Apartment Affordability

Date: June 25, 2019

Text: Financial Algebra-Cengage STEM Correlation: Technology & Math Lesson Length:

Big Idea (Cluster): Independent Living-Cost of Living

Mathematics K–12 Learning Standards: Create equations that describe numbers or relationships.

Mathematical Practice(s): Apply reliable information and systematic decision making to personal financial decisions.

Standard 1: Take responsibility for personal financial decisions.

Standard 2: Find and evaluate financial information from a variety of sources.

Standard 4: Make financial decisions by systematically considering alternatives and consequences.

Content Objectives: Calculate 28% affordable rent with Income

Language Objectives (ELL): RST.9-10.2

Vocabulary: Apartment, lease, tenant, landlord, lease, expires, evict, application deposit, security deposit, amenities.

Connections to Prior Learning Students have been calculating a percent of a number throughout the year.

Questions to Develop Mathematical Thinking:

- What portion of your income should go to housing? How much money do you need to get through a month? Can you afford this apartment?

Common Misconceptions: It's cheap, that the landlord can't make you move out, that you get your deposit back.

Assessment (Formative and Summative):

- An exit quiz will be given at end of lesson. A Summative exam will be given at the end of two units.

Materials:

- Financial Algebra Text Book, calculator, Paper and pencil, laptop with internet access.

Instruction Plan:

Introduction: Review of finding a percent of a number.

First home away from home. Discussion with entire class on thoughts of the different areas in Yakima. Decisions to be made. Location? How much will/should you pay? What's important in your choice (size, safety, amenities, parking, location). Can you afford it on your income? Have a Formative Q&A on vocabulary.

Review example 1 in the text book. Students will complete the "Check Your Understanding" on page 394 on their own. When finished they can share with their neighbor, then as a class.

Handout on different wages and what rent is affordable. Can you afford an apartment where you would like to live on minimum wage? How could you reduce the rent? Would it be

WAMC Lesson Plan

possible/difficult to have a roommate?

Exit quiz on finding a percent of a number. (a struggle all year for some students.)

Explore: Using different incomes, students will calculate net income and 28% for housing. Where in Yakima can we live for this amount?

When I observe students: They are using their calculator to find the total amount they can spend on an apartment. They must calculate their net income and add the rent. At this point they will find out how much is left of their paycheck to use for other expenses and "life."

Questions to Develop Mathematical Thinking as you observe: How much do expect to earn as a high school graduate, college graduate, trade school graduate...

Answers: Varies

Summarize: Students are beginning the unit and will follow up with a search for an apartment using Zillow, the newspaper, rental businesses in town.

Career Application(s):

- A lot of teachers at Davis High School have rentals as investments and income properties. Let's ask them where their rentals are located what they charge for rent.

Leadership/21st Century Skills:

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

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Name _____

Date _____

Pd.

Ch 7-1 Independent Living

1. What is the one thing that would make you NOT rent an apartment?

2. Jessica's monthly gross income is \$2,400. Show all work!
 - a. How much is she earning an hour?

 - b. She has decided to rent an apartment for \$700. Does this rent fall between the 25 and 30 percent recommended?

 - c. What would her net income be after taxes if she was taxed at 22%.

 - d. How much would she have left after taxes and rent?

3. What is a lease?

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Lab 7-1 Rubric

	4 Exemplary	3 Mastery	2 Substandard	1 Inadequate
Layout	<input type="checkbox"/> Appropriate choice of layout for providing information to user. <input type="checkbox"/> All of the placement of Headings and Subheadings is appropriate. <input type="checkbox"/> All of the Graphics are located appropriately with text. <input type="checkbox"/> All of the content text entries flow smoothly.	<input type="checkbox"/> Appropriate choice of layout for providing information to user. <input type="checkbox"/> Majority of the placement of Headings and Subheadings is appropriate. <input type="checkbox"/> Majority of the Graphics are located appropriately with text. <input type="checkbox"/> Majority of the content text entries flow smoothly.	<input type="checkbox"/> Inappropriate choice of layout for providing information to user. <input type="checkbox"/> Some of the placement of Headings and Subheadings is appropriate. <input type="checkbox"/> Some of the Graphics are located appropriately with text. <input type="checkbox"/> Some of the content text entries flow smoothly.	<input type="checkbox"/> Inappropriate choice of layout for providing information to user. <input type="checkbox"/> None of the placement of Headings and Subheadings is appropriate. <input type="checkbox"/> None of the Graphics are located appropriately with text. <input type="checkbox"/> None of the content text entries flow smoothly.
Format	<input type="checkbox"/> All Headings have the same font size. <input type="checkbox"/> All of the Subheadings have the same font size. <input type="checkbox"/> All of the content text entries have appropriate font. <input type="checkbox"/> All of the content text entries have the same font size.	<input type="checkbox"/> Majority of the Headings have the same font size. <input type="checkbox"/> Majority of Subheadings have the same font size. <input type="checkbox"/> Majority of the content text entries have appropriate font. <input type="checkbox"/> Majority of the content text entries have the same font size.	<input type="checkbox"/> Some of the Headings have the same font size. <input type="checkbox"/> Some of the Subheadings have the same font size. <input type="checkbox"/> Some of the content text entries have appropriate font. <input type="checkbox"/> Some of the content text entries have the same font size.	<input type="checkbox"/> None of the Headings have the same font size. <input type="checkbox"/> None of the Subheadings have the same font size. <input type="checkbox"/> None of the content text entries have appropriate font. <input type="checkbox"/> None of the content text entries have the same font size.
Graphics	<input type="checkbox"/> All of the graphics are appropriate. <input type="checkbox"/> All of the graphics are correctly labeled or identified. <input type="checkbox"/> All of the graphics enhance the text.	<input type="checkbox"/> Majority of the graphics are appropriate. <input type="checkbox"/> Majority of the graphics are correctly labeled or identified. <input type="checkbox"/> Majority of the graphics enhance the text.	<input type="checkbox"/> Some of the graphics are appropriate. <input type="checkbox"/> Some of the graphics are correctly labeled or identified. <input type="checkbox"/> Some of the graphics enhance the text.	<input type="checkbox"/> None of the graphics are appropriate. <input type="checkbox"/> None of the graphics are correctly labeled or identified. <input type="checkbox"/> None of the graphics enhance the text.
General	<input type="checkbox"/> No misspelled words. <input type="checkbox"/> Consistent Page Margins.	<input type="checkbox"/> No more than 3 misspelled words. <input type="checkbox"/> Consistent Page Margins.	<input type="checkbox"/> 4 – 10 misspelled words. <input type="checkbox"/> Inconsistent Page Margins.	<input type="checkbox"/> More than 10 misspelled words. <input type="checkbox"/> Inconsistent Page Margins.