

WAMC Lab Template

Math Concept(s):

Source / Text: Financial Algebra by Robert Gerver & Richard Sgroi

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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):

Lab Plan

Lab Title: 11.3 Charting a Budget

Prerequisite skills: Previous work in Excel (prior lessons), knowledge of vocabulary

Lab objective: Students will practice charting a budget according to payment schedules. Students will then calculate how much is owed (based on a percentage indicated) and create a pie chart.

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

Mathematics K–12 Learning Standards:

- Earning and Reporting Income
- Achievement Standard: Identify various forms of income and analyze factors that affect income as a part of the career decision-making process.
- Managing Finances and Budgeting

Standards for Mathematical Practice:

- Standard 2: Find and evaluate financial information from a variety of sources.
- Standard 4: Make financial decisions by systematically considering alternatives and consequences.
- Standard 5: Develop communication strategies for discussing financial issues.
- Standard 6: Control personal information

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

RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical

Context, texts and topics.

RST.9-10.10 read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

K-12 Science Standards

- Technology
 - 1.3.1 Identify and define authentic problems and significant questions for investigation and plan strategies to guide inquiry.

- 1.3.2 Locate and organize information from a variety of sources and media.

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Engineering

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Leadership/21st Century Skills:

21st Century Interdisciplinary themes (Check those that apply to the above activity.)			
<input type="checkbox"/> Global Awareness	<input checked="" type="checkbox"/> Financial/Economic/Business/Entrepreneurial Literacy	<input checked="" type="checkbox"/> Civic Literacy	
<input type="checkbox"/> Health/Safety Literacy	<input type="checkbox"/> Environmental Literacy		
21st Century Skills (Check those that students will demonstrate in the above activity.)			
LEARNING AND INNOVATION	INFORMATION, MEDIA & TECHNOLOGY SKILLS	LIFE & CAREER SKILLS	Productivity and Accountability
<u>Creativity and Innovation</u>	<u>Information Literacy</u>	<u>Flexibility and Adaptability</u>	<u>Manage Projects</u>
<input type="checkbox"/> Think Creatively	<input checked="" type="checkbox"/> Access and Evaluate Information	<input checked="" type="checkbox"/> Adapt to Change	<input checked="" type="checkbox"/> Produce Results
<input type="checkbox"/> Work Creatively with Others	<input checked="" type="checkbox"/> Use and manage Information	<input type="checkbox"/> Be Flexible	<input checked="" type="checkbox"/> Leadership and Responsibility
<input type="checkbox"/> Implement Innovations	<u>Media Literacy</u>	<u>Initiative and Self-Direction</u>	<input checked="" type="checkbox"/> Guide and Lead Others
<u>Critical Thinking and Problem Solving</u>	<input type="checkbox"/> Analyze Media	<input type="checkbox"/> Manage Goals and Time	<input checked="" type="checkbox"/> Be Responsible to Others
<input type="checkbox"/> Reason Effectively	<input type="checkbox"/> Create Media Products	<input checked="" type="checkbox"/> Work Independently	
<input type="checkbox"/> Use Systems Thinking	<u>Information, Communications and Technology (ICT Literacy)</u>	<input checked="" type="checkbox"/> Be Self-Directed Learners	
<input checked="" type="checkbox"/> Make Judgments and Decisions	<input checked="" type="checkbox"/> Apply Technology Effectively	<u>Social and Cross-Cultural</u>	
<input checked="" type="checkbox"/> Solve Problems		<input type="checkbox"/> Interact Effectively with Others	
<u>Communication and Collaboration</u>		<input type="checkbox"/> Work Effectively in Diverse Teams	
<input type="checkbox"/> Communicate Clearly			
<input type="checkbox"/> Collaborate with Others			

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

Materials

- Excel Worksheet, calculator

Set-Up Required:

-

Lab Organization Strategies:

Leadership (Connect to 21st Century Skills selected):

-

Cooperative Learning:

-

Expectations: Students should be able to complete both graphs in one class period

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Timeline:

- One class period

Post Lab Follow-Up/Conclusions:

Discuss real world application of learning from lab

- Students will be able to see budget information in a concrete way that shows the segmentation of various expenses

Career Applications

- Actuary, marketing, projection for future growth, budgeting, purchasing

Optional or Extension Activities

-

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Name:

Period

Create a year-long budget check-off chart that keeps track of the following household expenses. Put a checkmark in the month when the bills are to be paid.

Mortgage: monthly

Utilities: monthly

Garbage / Water: quarterly

Insurance: semi-annually

Internet / Cable: quarterly

Landline telephone: monthly

Cell Phone: monthly

Lawn and Garden: April through September

Snow Removal: December through March

Food: Monthly

Childcare: every other month beginning in Feb

Vet expenses: semi-annually

11.3 Charting A Budget using a Check Off Chart

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Mortgage												
Utilities												
Sanitation												
Insurance												
Internet												
Cell Phone												
Lawn/Garden												
Snow Removal												
Food												
Childcare												
Vet												

11.3 Charting a Budget using a Pie chart

Name:

Rebecca has a take home net pay of \$3,000. Using the percentages given in column A calculate how much money she pays for each expense and insert the amount in column C.

Using the data in column C, create a Pie chart below showing the distributions.

\$3,000

30%	Mortgage				
8%	Utilities				
7%	Cell Phone				
1%	Renter's Insurance				
2%	Car Insurance				
15%	Food				
2%	Gym Membership				
10%	transportation / gas				
10%	grooming / clothing				
10%	leisure (netflix, movies, activities)				
5%	Savings				

11.3 Charting a Budget using a Pie chart

Name:

Rebecca has a take home net pay of \$3,000. Using the percentages given in column A calculate how much money she pays for each expense and insert the amount in column C.

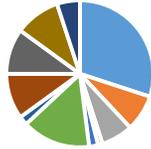
Using the data in column C, create a Pie chart below showing the distributions.

3,000

0.3	Mortgage	\$ 900.00	
0.08	Utilities	\$ 240.00	
0.07	Cell Phone	\$ 210.00	
0.01	Renter's Insurance	\$ 30.00	
0.02	Car Insurance	\$ 60.00	
0.15	Food	\$ 450.00	
0.02	Gym Membership	\$ 60.00	
0.1	transportation / gas	\$ 300.00	
0.1	grooming / clothing	\$ 300.00	
0.1	leisure (netflix, movies, activities)	\$ 300.00	
0.05	Savings	\$ 150.00	

Washington

Chart Title



- Mortgage
- Cell Phone
- Car Insurance
- Gym Membership
- grooming / clothing
- Savings
- Utilities
- Renter's Insurance
- Food
- transportation / gas
- leisure (netflix, movies, activities)

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