WAMC Lab Template

Math Concept(s):

Source / Text:

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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):

During chapter one, students will learn various aspects of the stock market. This lab is designed to allow students to experience the process of buying and selling stock. It will require them to use prior knowledge used in 1-1 to 1-6 (8-1 to 8-7 in the new edition of the book).

Lab Plan

Lab Title: Calculating net proceeds with brokerage fees.

Prerequisite skills: Understanding of prior sections in unit 8 including: How to read stock market data, how to read a stock ticker, basic vocabulary buying and selling shares of stock, understanding of how brokerage fees are charged for the purchase and sale of stocks

Lab objective: Students will be able to calculate their net proceeds of their fictitious sales of stock that they have purchased. Students will understand and calculate fees into the purchase and sales of stock to arrive at their net proceeds.

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

Mathematics K–12 Learning Standards:

- N-Q1
- A-CED1
- A-CED4
- A-REI3

Standards for Mathematical Practice:

- Make sense of problems and persevere in solving them
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically

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

- CCR7
-

K-12 Science Standards

- NA

Technology

- Desktop computer or cell phone.

Engineering

- NA

Leadership/21st Century Skills:

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

x☐ Global Awareness xx☐ 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

x☐ Make Judgments and Decisions

X☐ Solve Problems

Communication and Collaboration

☐ Communicate Clearly

X☐ Collaborate with Others

INFORMATION, MEDIA & TECHNOLOGY SKILLS

Information Literacy

☐ Access and Evaluate Information

x☐ Use and manage Information

Media Literacy

x☐ 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

X☐ Interact Effectively with Others

☐ Work Effectively in Diverse Teams

Productivity and Accountability

☐ Manage Projects

☐ Produce Results

Leadership and Responsibility

☐ Guide and Lead Others

☐ Be Responsible to Others

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

Materials

- Access to the internet
- Stock purchase worksheet
- Fee schedule for buying and selling the stock (flat fee and percentage)
- Space for showing calculations.

Set-Up Required:

- Pass out stock game spreadsheet.
- Access to computers

Lab Organization Strategies:

Leadership (Connect to 21st Century Skills selected):

Cooperative Learning:

- Students will share their results with the class to come up with a rate of return for the entire class. Students will share knowledge of how to set-up Yahoo accounts and what types of stock they picked and why.

Expectations:

Students will spend $10,000 in fictitious money and have reasons for why they picked the stocks that they did.

Timeline:

- 1 hour to demonstrate how to look up stock prices and for the students to pick $10,000 worth of stock.
- 10 days to pass so that stock prices can change. At the end of chapter 1-6 (8-7 in the new book) students will sell the stocks.
- 1 hour to sell and calculate fees, net proceeds, and rate of return for both themselves and the class.

Post Lab Follow-Up/Conclusions:

Discuss real world application of learning from lab

- Students will learn how long-term investing can create wealth. They will also learn how the stock exchange works and how stockbrokers make money.

Career Applications

- Stock Brooker

Optional or Extension Activities

- Check stocks again at a much later date to see how they have changed over a longer period of time.

STOCK MARKET LAB INSTRUCTIONS

After the class has finished with section 1-2 on Stock Market Data, pass out the spreadsheet for the stock market game.

Instruct students on how to look up stocks on Yahoo.com finance tab.

Tell students they can buy as many stocks as they wish but they can only spend $10,000 dollars.

Students will write in the full name of the company, the stock symbol of that company, the price they paid for the stock, the fee they had to pay the stockbroker (1% of the total purchase price) and their total investment in that stock (total purchase price + the fee). Do not fill out anything else on the chart yet.

When the class has finished with section 1-6 (8-7 in the new textbook), they will sell the stock. Hopefully enough time has passed so that the stock price has changed.

They will all sell on the same day at the current price of the stock on that day. They will then calculate their **gross earnings** from the sale. They then will calculate the fee for selling the stock (a $35 flat fee). **They will subtract the fee from their gross earning to arrive at their sale proceeds.**

Students will then find their **net proceeds** by taking their **sale proceeds and subtract their purchase cost**. Place their name and their net proceeds on the classroom white board.

Students will calculate their rate of return by dividing their total cost by their net proceeds.

The class will then find the class net proceeds by calculating the rate of return of the entire class from the information on the white board.

Washington Applied Math Council

https://wa-appliedmath.org/

Math - Problem Solving : Stock Market Game

Teacher Name: **Doug Fassler**

Student Name: _____

CATEGORY	50	40	30	20
Mathematical Errors	No Math errors on spreadsheet. Student showed all work	No Math errors, student did not show all of their work	Math errors on the spreadsheet. Student did show their work	Math errors on the spreadsheet and student showed little to no work
Neatness and Organization	The work is presented in a neat, clear, organized fashion that is easy to read.	The work is presented in a neat and organized fashion that is usually easy to read.	The work is presented in an organized fashion but may be hard to read at times.	The work appears sloppy and unorganized. It is hard to know what information goes together.
Mathematical Terminology and Notation	Correct terminology and notation are always used, making it easy to understand what was done.	Correct terminology and notation are usually used, making it fairly easy to understand what was done.	Correct terminology and notation are used, but it is sometimes not easy to understand what was done.	There is little use, or a lot of inappropriate use, of terminology and notation.