WAMC Lab Template

Math Concept(s): RETURN ON INVESTMENT (ROI)
Source / Text: Algebra 1 Learning in Context
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Attach the following documents:

- ✓ Lab Instructions: Team of 4 will be preferable

Before the lab:

- ✓ Print out the scavenger hunt clue posters, please use the 3rd worksheet attached. Print them on colored paper so they stand out, if possible. If you would like to use them for later, laminate them.
- ✓ Shuffle the pages up so they will be randomly distributed around the room
- ✓ Tape up the poster around the room
- ✓ Print out a recording sheet for each student, if you are using groups one will be okay

During the lab:

1. Each group of 4 or 2 will start at a different poster. Students must write down the letter of the poster they started at in box number 1, and then solve the problem at the bottom of the poster.
2. When they have an answer, they look around the room to find the answer at the top of one of the poster. They move to that poster, write down the letter in box 2, and solve the problem at the bottom.
3. Groups continue in this manner until they return to the poster they started on. Groups should have visited all posters before returning to the start.

Student Handout(s):

- Student worksheet: Write ALL your names on the paper, once the lab in done, please turn them in for credit.
- Rubric and/or Assessment Tool:
    1. 3 -ROI Worksheet
    2. Lab Group Challenge Evaluation

1. Calculate the ROI of an investment that you purchased at $5,382 and sold at $7,129.

2. You purchase 12 shares of Bobby Toy Corp. stock at $31.25. You sell all the shares at $42.93, what is your ROI?

3. What is the ROI of your mutual funds that you buy at $35,982 and sell at $41,938?

Answer Key

1. 32.46%
2. 16.55%
3. 37.38%

Name: _____

LAB CHALLENGE EVALUATION

Team Name: _____
Project Manager: _____

Peer-Evaluation
DIRECTIONS: Describe how you and your team contributed to this challenge.

Team Member Name	Peer Evaluation	Score
Your name:		
Team member:		
Team member:		
Team member:		

Self-Evaluation
DIRECTIONS: Describe how you exhibited the 21st Century Skills involved in this challenge:

21st Century Skill	Self - Evaluation	Score
Think creatively		
Work creatively with others		
Implement innovation		
Solve problems		
Communicate clearly		
Collaborate with other		
Create media products		

Scoring Guide

0 -1: I/Team member made little to no contributions to the project. I/Team member was frequently absent from class or participated minimally outside of class or during the sale.

2: I/Team member contributed somewhat to the project. Some effort was exerted; however it did not prove to be critical to the overall success. No leadership qualities were expressed.

3: I/Team member made a significant contribution to the project. I/Team member was attentive in class, outside of class and during the sale. Team member proved to be an integral part of the team's success.

4: I/Team member made an outstanding contribution to the project and emerged as a true leader. I/Team member exceeded expectations and contributed fully to the project, demonstrating commitment and hard work. I/Team member is a worthy candidate of becoming "THE APPRENTICE."

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

Lab will take place in my classroom or you can go outside if the weather permits.

Lab Plan

Lab Title: RETURN ON INVESTMENT (ROI), More Scavenger Hunt.
Prerequisite skills: Students have learned how to:

1. Multiply ROI on a calculator
2. How to use ROI in our daily life.

Lab objective:

Learning Objectives	Students will be able to: • Define the term "Return on Investment- ROE" • Self-reflect on personal and group strengths

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

Mathematics K–12 Learning Standards:

Standards for Mathematical Practice: CCLS- Math:

Mathematics K–12 Learning Standards: A-CED 4 : Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.
For example, rearrange Ohm's law V =IR to highlight resistance R.

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

CCSS.ELA-LITERACY.SL.9-10.1
Initiate and participate effectively in a range of collaboration discussions (one-on-one, in groups, and teacher led), with diverse partners on grades 9-12 topics, texts, and issues building on others' ideas and expressing their won clearly and persuasively.

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
☐ Be Responsible to Others

Leadership component for this lab:

Students will pick a group leader for the project. The leader will be ensuring that guideless will be follow and keep everyone on task. Group will need TWO calculator person for double checking on answers, and scriber. The scriber will write the answers on the worksheet and will make sure ALL WORK IS shown on each square. Students will ALL communicate clearly, efficiently, and collaborate with each other providing that they can group as a group with respect!

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

Materials

- Pencils, Discount worksheet and YOUR AMAZING BRAIN!

Set-Up Required:

- Have students get in groups of 4's and designate the team responsibilities. Team leader will come up to the front of the table and get the ONE worksheet for the team. Once worksheet is collected, groups will group under a poster that is located around the room.

Lab Organization Strategies:

Leadership (Connect to 21st Century Skills selected):

- Think creatively
- Work creatively and respectfully with others
- Solve problems
- Communicate clearly
- Adapt to change and attitudes
- Be flexible
- Be self-directed learners
- Manage projects
- Produce results

Cooperative Learning:

- Students work in a team with a designated lead. All students will contribute their ideas clearly and productively.

Expectations:

Students will stay focus, on task, and will share their results with the teacher. Worksheet must have 4 names on paper for grading.

Timeline:

- 15-30 minutes

Post Lab Follow-Up/Conclusions:

ROI real world application of learning from lab:

- ROI will be useful for anything in investment outside this room. (e.g. stock market,).

Career Applications

- Business, Marketing, Investment, Stock Market

Optional or Extension Activities

- Exit post-it notes tickets to be place on STOP LIGHT on your way out the classroom