

## **WAMC Lab Template**

Math Concept(s): Employment Basics – Career Comparison

Source / Text: Financial Algebra

Developed by: Dorian Byrd

E-Mail: dbyrd@cheneysd.org

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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):**

The objective of this activity is to research and compare career salaries and pathways. Each student researches career information. Then, in various rounds, students compare their job title, annual income, skills, education, and industry. Afterwards, students will explore other jobs in the same field and how job skills can transition to other career opportunities. They will then calculate annually, weekly, monthly salaries as well as gross and net incomes.

### **Lab Plan**

Lab Title: Employment Basics – Career Comparison

Prerequisite skills: Communicate Clearly, collaborate with others, make judgements and decisions, percentages. Research skills.

Lab objective:

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

Mathematics K–12 Learning Standards:

CCSS.7.RPA.A.3 Use proportional relationships to solve percent problems.

7EE - Solve real-life and mathematical problems using numerical and algebraic expressions and equations

<b>National Standards for Personal Financial Education</b>	Earning Income <ul style="list-style-type: none"><li>• 6a: Calculate the amount of taxes a person is likely to pay when given information or data about the person's sources of income and amount of spending</li></ul>
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Financial Algebra Learning Standards:

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

- Employment and Income 9.EI Explore job and career options. 1. Explore a career plan that aligns with personal interests, financial goals, and desired lifestyle.

Standards for Mathematical Practice:

- 1. Make sense of problems and persevere in solving them
- 4. Model with math
- 6. Attend to precision
- 7. Look for and make use of structure

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

- Speaking and listening. Comprehension and Collaboration
  - Work with peers to set rules for collegial discussions and decision making.

K-12 Science Standards

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Technology

3. Knowledge Constructor - Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

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 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**

Creativity and Innovation

- Think Creatively
- Work Creatively with Others
- X Implement Innovations

Critical Thinking and Problem Solving

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

Communication and Collaboration

- X Communicate Clearly
- X Collaborate with Others

**INFORMATION, MEDIA & TECHNOLOGY SKILLS**

Information Literacy

- Access and Evaluate Information
- X Use and manage Information

Media Literacy

- Analyze Media
- Create Media Products

Information, Communications and Technology (ICT Literacy)

- X Apply Technology Effectively

**LIFE & CAREER SKILLS**

Flexibility and Adaptability

- X Adapt to Change
- X Be Flexible

Initiative and Self-Direction

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

Social and Cross-Cultural

- X Interact Effectively with Others
- X Work Effectively in Diverse Teams

**Productivity and Accountability**

- X Manage Projects
- X Produce Results

Leadership and Responsibility

- X Guide and Lead Others
- X Be Responsible to Others

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

### Materials

- Student Computers
- Note Cards
- Math Questions printed around the room.

### Set-Up Required:

If possible, prepare a space where your students can initially form one large circle and later form smaller groups of 4-5. Otherwise, adjust group sizes to fit your space and class size.

Print Questions to post around the room.

### **Lab Organization Strategies:**

Leadership (Connect to 21<sup>st</sup> Century Skills selected):

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### Cooperative Learning:

All Class and small group work.

### Expectations:

It is expected that students will participate and gain understanding about career statistics, calculating gross and net pay, and teamwork.

### Timeline:

Give 20 minutes for Career Research and then activity should take about 30-45 minutes.

### **Post Lab Follow-Up/Conclusions:**

Discuss real world application of learning from lab:

#### Career Applications

Career Research and Comparison of Salary, Education, Industry, and Skills.

#### Optional or Extension Activities

### Lab Instructions:

A. Students research a career that interests them. One provided note cards they need to include a job title, annual salary, educational background, skills, and industry and that students will be using that information to play the game and participate in class discussion.

#### **Example of NoteCard:**

**Job Title:** Registered Nurse

**Annual Salary:** \$71,730

**Education:** High School Degree, Associate's Degree, Bachelor's Degree Preferred, License

**Industry:** Healthcare

### **Skills:**

- Medical knowledge
- Confidentiality
- Communication skills
- Physical ability
- Administrative and organization skills

- B. Instruct students to get out of their seats and form a circle arranging themselves from lowest salary to highest salary. The teacher will join the circle in between the highest paid and lowest paid salaries.
- C. After the circle is formed, verify that students are in the correct order by having them say their salary amount one at a time, starting from the lowest and going around the circle.
- D. ON THE BACK OF YOUR CARD - Answer Math Question on your Board
- E. Facilitate as much or as little discussion as you'd like using the questions provided.

### **Possible Discussion Questions:**

1. Based on your job title, who is surprised by where they ended up in the circle? Why?
2. Based on your job title, who thinks they should be making more money? Why?

### **Round 2: Compare Industries**

- A. Instruct students to get into groups of 4-5 with classmates who are in the same industry as them.
- B. Instruct students to compare the information on their cards with their group members. Then, have students answer one or more discussion questions in their groups.
- C. ON THE BACK OF YOUR CARD - Answer Math Question on your Board

### **Possible Discussion Questions:**

1. Given what you know about each job in your group, what might explain the difference in salaries?
2. Is there another job in your industry you would be qualified for based on the information on your card? Which job and why?

### **Round 3: Compare Skills**

- A. Instruct students to find a partner with a similar skill set, but different industry.
- B. Instruct students to compare the information on their cards with their partners. Then, have students answer one or more discussion questions in their groups.
- C. ON THE BACK OF YOUR CARD - Answer Math Question on your Board

### **Possible Discussion Questions:**

1. Based on your job's skill set, could you effectively do your partner's job? Why or why not?
2. Why is it important to understand how skill sets transfer to other industries?
3. ON THE BACK OF YOUR CARD - Answer Math Question on your Board!

### **Part III: Whole Group Reflection**

- A. Instruct students to return to their seats or form a circle again.
- B. Facilitate a whole class discussion using one or more of the questions provided below. Alternatively, you can have students answer the question(s) in writing.

C. ON THE BACK OF YOUR CARD - Answer Math Question on your Board

**Possible Discussion Questions in Summary:**

1. What information on your *Career Comparison Cards* do you think contributes most to making more or less money?
2. What were some myths or misconceptions about job titles or industries that were revealed during this game?
3. What were some of the highlights of when you grouped up with other people in your industry?
4. What were your biggest takeaways from comparing jobs and career pathways?

# Applied

Math Questions Posted on Boards

1. Compute your annual, weekly, and monthly GROSS salary.
2. How much money will come out of your annual pay for Social Security? (post percentage)
3. How much money will come out of your annual pay for Medicare? (post percentage)
4. How much money will come out of your annual pay for Federal Income Tax? (post brackets on board)
5. What is your annual NET pay?

# Math Council

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