

Lab Template

Text: CORD Applied Mathematics

Volume: _____ Chapter: _____

Unit number: Unit 9 Title of unit: Using Ratios and Proportions

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Date: 6/27/12

Attach the Following Documents:

1. Lab Instructions
2. Student Handout(s)
3. Rubric and/or Assessment Tool

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

This lab can be done in any classroom. Students will be given a handout to chart their results, and one magazine per pair. After finishing the first magazine, they will trade with another group and compare the magazines. The main purpose for this project is to reintroduce them to how ratios might be used.

Ratios in Advertising

LAB PLAN

TEACHER: (Teacher Prep/Lab Plan)

- ▲ **Lab Objective**
- ▲ Compute Ratios and make inferences from their results
- ▲ **Statement of prerequisite skills needed** (Vocabulary, Measurement Techniques, Formulas, etc.)
 - Students should have learned about Ratios in 6th and 7th grade.
- ▲ **Vocabulary**
 - Ratio

State Standards addressed: (Highlight "Green" Standards, you may use your District's Power Standards if applicable)

- ⤴ **Math:**
 - ⤴ 7.2.C Describe proportional relationships in similar figures and solve problems involving similar figures.
 - ⤴ A1.6.B Make valid inferences and draw conclusions based on data.
 - ⤴ A1.6.A Use and evaluate the accuracy of summary statistics to describe and compare data sets.
- ⤴ **Reading:**
- ⤴ **Writing:**
- ⤴ **Leadership: Students will work in groups of two...a recorder and a detective**
- ⤴ **SCAN Skills/Workplace Skills:**

- ⤴ **Teacher Preparation:** (*What materials and set-up are required for this lesson?*)
 - ⤴ Materials: 20+ magazines (I have a bunch in my room because I teach Fashion Marketing)
 - ⤴ Set-Up Required: Copy Handouts and get out magazines

- ⤴ **Lab Organizational Strategies:**
 - ⤴ Grouping/Leadership/Presentation Opportunities:
 - ⤴ Cooperative Learning:
 - ⤴ Expectations: I would like students to make predictions about what kind of advertisements they will find in each magazine
 - ⤴ Time-line: one day

Ask students for the following:

- *Words that they often see, or assume they will see in advertisements in fashion magazines. (examples: Hot, Fashionable, Sexy...)
- *Background color that they often see in advertisements in fashion magazines. (examples: Black, White, Pink, Flesh...)
- *The type of advertisements they expect to see in fashion magazines. (examples: hair products, skin care/makeup/nails, food, perfume, clothing/shoes/accessories, other.

We will be concentrating on these different types of advertisements. I labeled them:

Beauty (hair/skin/makeup/nails/perfume)

Wearables (clothing/shoes/accessories)

Risky (drugs/alcohol/cigarettes)

E & O (food/non alcohol beverages/cars/Other)

Students will form pairs; the Detective and the Recorder

They will look through the Female Fashion Magazine; count and record the types of advertisements.

After recording the type of advertisements they will record some ratios and predict what they will find in Male Fashion Magazines.

After predicting, they will actually count the types of advertisements in a Male Fashion Magazine. They will record the results and record some ratios. Then they will get a new Female Fashion magazine to count and record the advertisements and ratios.

⤴ **Post Lab Follow-Up/Conclusions** *(to be covered after student completes lab)*

⤴ Discuss real world application of learning from lab:

Finally, students will be given a few problems to solve and will write some conclusions about the lab. Then there will be a wrap up discussion about future predictions.

What would you expect to happen with other types of magazines?

What would you expect to happen with the same magazines for other months?

⤴ Career Applications:

Which companies or professions would be interested in knowing about this information? How would someone use this information?

⤴ Optional or Extension Activities:

⤴ You can use different types of magazines and interpret results in other ways.

Ratios in Advertising

Name of Recorder: _____

Name of Detective: _____

Directions:

1. Pair up
2. Choose a Recorder and a Detective
3. Record your names above
4. Grab a Female Fashion Magazine
5. Count out the # of types of advertisements as listed below.
6. Calculate (List Out) the various ratios that are requested
7. Make predictions/Estimate the # of types of advertisements in Male Fashion Magazines:
Do you expect the advertisements to be the same or different for a Male Fashion Magazine? Estimate the number of each type of advertisement
8. Grab a Male Fashion Magazine
9. Count out and Record the # of types of advertisements listed below.
10. Calculate the various ratios that are requested
11. Grab a new Female Fashion Magazine
12. Count out and Record the # of types of advertisements listed below.
13. Calculate the various ratios that are requested
14. Write out your conclusions.
15. Each student will turn in their own packet.

	Female Magazine #1	Male Magazine		Female Magazine #2
		predict	verify	verify
	# of ads	# of ads	# of ads	# of ads
Beauty (skin/hair/nails/perfume)				
Wearables (clothing/shoes/accessories)				
Risky (drugs/alcohol/cigarettes)				
E&O (Edibles/Food/non-alcoholic-beverages/other)				
Total Advertisements				
Name of Magazine	Female Magazine #1	Male Magazine	Female Magazine #2	
Ratios				

Risky to Beauty			
Risky to Wearables			
Risky to E & O			
Risky to Total Advertisements			
Beauty to Risky			
Beauty to Wearables			
Beauty to E&O			
Beauty to Total Advertisements			

- 1) What did you discover from this exercise? (use complete sentences)

- 2) What would you expect to happen with other types of magazines?

- 3) What would you expect to happen with the same magazines for other months?

- 4) Which companies or professions would be interested in knowing about this information?

- 5) How would you change this activity?

- 6) You work in the Advertising Department for a new makeup called Crow's Folly and want to advertise in a Female Fashion Magazine. You are planning out advertising for the rest of the year, but must get buy off from your targeted Fashion Magazine. Write a letter to the Marketing Executive from your targeted Fashion Magazine talking about your results and pursued her/him to allow you to have your advertisement in his/her magazine. Remember, this magazine will already have agreements with other makeup companies, so

you will need to justify your position with your findings. (Hint: You might need to do some more detective work with your magazine.)

Rubric For Ratios in Advertising Unit 9

Name: _____

Date: _____

Grade: _____

Teacher: _____

	Criteria				Value
	1	2	3	4	
Problem Solving	Little or no understanding of the problem is evidenced.	Numerous errors when solving problems.	Few errors when solving problems.	No errors when solving problems.	----
Math Content	Demonstrates little or no knowledge or application of math skills.	Demonstrates a limited knowledge and application of math skills.	Demonstrates a general knowledge and application of math skills.	Demonstrates a clear knowledge and application of math skills.	----
Math Communication	Inaccurately communicates solutions to problems and concepts.	Limited communication of solutions to problems and concepts.	Satisfactorily communicates solutions to problems and concepts.	Accurately communicates solutions to problems and concepts.	----
Presentation	The reader is unable to follow the steps taken in the solution.	Solution is difficult to follow at times.	Solution is presented in a logical manner.	Solution is presented in an easy follow step-by-step model.	----
Use of Mathematical Terminology	No mathematical terminology is used or attempted.	Some mathematical terminology is presented, but not correctly used.	Mathematical terminology correctly used.	Mathematical terminology is prevalent and used correctly.	----
				Total:----	----

TEACHER COMMENTS