

## WAMC Lesson Plan

Name(s): Rick Chance

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Lesson Title: Travel Expenses – CH 1-2

Date: 6/26/19

Text: Financial Alg.

STEM Correlation: Math, Technology

Lesson Length: 1 day

Big Idea (Cluster): Summation, frequency, mean, median, mode	
Mathematics K–12 Learning Standards: 6.5S, S-ID2, 7.SP6	
<b>Mathematical Practice(s):</b> Make sense of problems and persevere in solving them; Construct viable arguments and critique the reasoning of others; Model with mathematics; Attend to Precision	
Content Objectives: Determine and interpret frequency; relative frequency, cumulative frequency, model a situation, determine percentiles	Language Objectives (ELL): Ability to understand and convey key terms regarding accident reconstructionist
Vocabulary: Cumulative Frequency. Spreadsheet, relative frequency, percentile, percentile rank	Connections to Prior Learning: st. should be familiar with measures of central tendency
Questions to Develop Mathematical Thinking: <ul style="list-style-type: none"> <li>• See below</li> </ul>	Common Misconceptions: <ul style="list-style-type: none"> <li>• Mix-up of central tendencies</li> <li>•</li> </ul>

Assessment (Formative and Summative):

- Formative: As groups work through and share examples, we will stop after each one, ask and answer questions – turn and talks – restate and rethink

Materials:

- Textbook; sticky notes

Instruction Plan:

Introduction: Travel is the only thing you buy that makes you richer. What does the author mean? If you could travel anywhere, where would you go and why? What if you could travel for work, would you? What are the pros and cons? What costs go into travel? (make a list)

Explore: Students will be assigned 1 of 5 groups. Each group will complete an example from the book on large white paper to present to the class. Each of the 5 groups will post their work, each student will get 8 sticky notes and move around from poster to poster. St. must ask one question for explanation and give one “ah ha” or good thought to each of the other groups. After the walk around each group will return to their poster, read over the sticky notes, and then present their problem being sure to answer any questions that were asked

When I observe students: struggling I will encourage them to ask their clarifying questions on the sticky notes

Questions to Develop Mathematical Thinking as you observe: What connection does this have to real life? Have you ever heard of kids who are in the “98<sup>th</sup> percentile” for height or weight? Connect this to my 4yr old, who is 98<sup>th</sup> percentile in height and 58<sup>th</sup> in weight.

Answers: Found in text

Summarize: students will have a solid understanding of measures of central tendency, as well as frequency’s and percentile ranks.

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Career Application(s):

- DOT, any travel field, finance, tourism, chamber of commerce, payroll

Leadership/21<sup>st</sup> 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

# Math

# Council

**1-2 Travel Expenses Show work for full credit. Put a box around your answer.**

- Shannon is traveling from NY to Boston by train. She doesn't know when she will return, therefore she is only purchasing a one-way fare. Below is a list of all available fares, find the percentile rank for a fare of \$119.

49	49	88	88	112	112	112	119	119	119
119	133	133	133	144	144	148	148	154	154
168	168	168	212	212	212	212	218	218	218

- People travel all over the world. The National Parks tracks how many people visit Mt. Rainier by car each year. The following table shows the collected data.

2015 Month	# of Vehicles
April	127,355
May	140,226
June	135,000
July	128,850
August	145,000
September	175,000

- Find the average number of vehicles that visit during the 6<sup>th</sup> month summer frequency.
- Find the median number of vehicles
- What percent of vehicles entered the park during April, May and June combined?

- Complete a "Cumulative Frequency Column."

2015 Month	# of Vehicles	Cumulative Frequency
April	127,355	
May	140,226	
June	135,000	
July	128,850	
August	145,000	
September	175,000	

Answers:

- 1) 37%
- 2a) 141,905
- 2b) 137,613
- 2c) 47.3%
- 3)

2015 Month	# of Vehicles	Cumulative Frequency
April	127,355	127,355
May	140, 226	267,581
June	135,000	402,581
July	128,850	547,581
August	145,000	722,581
September	175,000	851,431

# Washington Applied Math Council