Lab Framework

Text:CORD

Unit number and title: #9 Ratios and Proportions

Short Description: Students will use ratios and proportions to calculate the efficiency of our food distribution system.

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Lab Title
Calories in VS. Calories out

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**
  Students answer the question by evaluating the calories they would get consuming a food vs. the calories used to deliver the food.
- **Statement of pre-requisite skills needed** (i.e., vocabulary, measurement techniques, formulas, etc.)
  Basic skills in reading, addition, subtraction, multiplication and division
- **Vocabulary**
  Calorie, Kcal, Diesel, efficiency
- **Materials List**
  Common food items
- **State Standards addressed**
  Math: 6.1.C, 6.3.D
  Reading: 1.2.2, 3.2.2
  Writing: 2.2, 2.4, 3.1
- **Leadership Skills**
  FFA
- **SCAN Skills/Workplace Skills**

  Thinking Skills Creative thinking, Decision making, problem solving, Reasoning

- **Set-up information**
  Need common grocery items, food calorie chart / book
- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required)**
  At least 50 min. but could be stretched for a week
- **Teacher Assessment of student learning** (scoring guide, rubric)
  Students can use units of measurement accurately to calculate the efficiency of a ratio. Then analyze the accuracy of their conclusion.
- **Summary of learning** (to be finished after student completes lab)
  -discuss real world application of learning from lab
  Should we build a local food economy or national food economy?
  Is an international food economy sustainable?
  -opportunity for students to share/present learning
  Each group of students should pick two favorite foods to evaluate for calories in vs. calories out to present to the class.

- **Optional activities**
  In small groups make a Pizza from scratch adding up the total calories in all the ingredients and all of the distances traveled to get the ingredients.
- **Career Applications**
  Informed consumer, farmer, commodities broker, truck driver, agricultural processor.

LAB TITLE:_____
STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
- **Grouping instructions and roles**
- **Procedures** – steps to follow/instructions
- **Outcome instructions**
- **Assessment instructions** (peer-teacher)

Lab Data Collection

Student: _____ **Date:** _____

Unit: _____

Lab Title:

Criteria: Write the problem/objective in statement form

Data Collection: Record the collected/given data

Calculations: Complete the given calculations to solve for an answer(s)

Summary Statement:

Other Assessment(s)