

Knowledge "Standard":
MST#3 - understand mathematics by...applying mathematics in a real-world setting....

Commencement #4 - choose appropriate representations to facilitate the solving of a problem.

CHALLENGE SCENARIO

Demographic Study

High School Mathematics

Skill/Disposition "Standard":
C-DOS Standard #3a- demonstrate mastery of a foundation skill

Commencement #2 - Use thinking skills to demonstrate ability to solve problems in new and unfamiliar situations

Mrs. Curtis' CII Class
Morrisville-Eaton Central School
Box 990 Fearon Rd.
Morrisville, NY 13408

Dear Course II Students:

As you may already know, our community has been experiencing many demographic changes over the past 20 years. We hear our parents talk about them. We hear teachers and business leaders talk about them. To what extent are these changes really happening? There seems to be a lot of talk, but little data.

My social studies classes have been investigating this very issue. We have recently conducted a large scale survey of our community to investigate various demographic factors. We have compiled a rather large computer database of our surveys. But the surveys will not answer our questions by themselves: What is the nature of the demographic changes (if any)? To answer this question we need to analyze our survey data using adequate statistics.

This is where you come in. We would like you, statistical experts, to analyze our data and tell us some of the basics. What statistics would be valuable when studying this data? (I have spoken with Mrs. Curtis and she has suggested mean, median, mode, and range would be appropriate.) What does the data show? How do we visually represent our data?

We would like you to analyze our data and write a booklet what 1) graphically represents the data and 2) describes patterns in our survey data. We will then use your statistical analysis to continue our study. We request that we receive your booklet no later than May 20.

Thank you for assisting us in our investigation. We look forward to hearing from you.

Sincerely,

Ms. Nowon
Ms. Nowon's Social Studies Classes

This challenge was developed by Lorren Hotaling, a science teacher at Norwich City Schools, Norwich, NY.