Subject: Mathematics - Statistics   **Grade: Twelfth**

Key Concept: Key Concept: Students are knowledgeable, analytical, thoughtful consumers of data. Generalization: Students formulate a question that can be addressed with data and collect, organize, and display the data.

Background:
This lesson would be an end-of-course culminating activity and should be completed in groups consisting of two to four students.

Students choose a tier according to interest in a question and decide to use a survey, observational study, or experiment to answer the question.

Directions for all the tiers are the same. Students determine a question they would like to answer, decide on a appropriate means for data collection, and prepare a presentation of the information to share with the class. The presentation should include a complete analysis of the data and the answer to the question of interest. However, a variety of presentation methods would be appropriate, e.g., a poster, a PowerPoint display, a written report, or a radio/TV show interview.

This lesson will take a number of days to complete as students will need time to decide on a question, collect the data, analyze the data, and prepare the presentation. You will also need 1-2 days for students to make their presentations.

This lesson is tiered in *process and product* according to *interest*.

The tiers could be based on the questions or the products.

Those listed here represent the products produced.
Tier 1: Poster   Tier II: Power Point   Tier III: Written report   Tier IV: Radio/TV

Assessment: Assessment:
A rubric for each product should be based primarily on neatness, organization, accuracy of the information, and accuracy of the statistical analysis. The rubrics should be given to the students at the beginning the lesson since the decision on which product will be made after selecting a question.