

Descriptive Statistics

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Set: Begin the class with the question: “Can one person make a difference?” Show the teacher-made *Power Point* with The Starfish poem. Recall with students that we have learned about measures of central tendency and how to make various types of graphs using the *Excel* and *activBook Reader* programs. All of the information that we have graphed is information that we have retrieved from the Internet and turned into graphs. We are taking our experience a step farther. As a class, we are going to be conducting an opinion survey about recycling. We will gather information, display that data, and draw conclusions from it.

Standard: The student, given a problem situation, will collect, analyze, display, and interpret data, using a variety of graphical methods. Appropriate technology will be used to create graphical displays.

Objectives: The learner will:

- Develop non-biased survey questions about the given topic.
- Survey a cross-section of students.
- Use Excel to create a spreadsheet and graph of data.
- Draw conclusions from collected data.

Plan:

- Complete the survey and the appropriate graphs.
- Tell students that we are going to conduct a survey about recycling and then create graphs to display our results.
- Groups will create an appropriate spreadsheet and graph to display their findings.
- Groups will draw conclusions and look for trends within their data.
- Each group of students will choose three of the Math Recycling: Tic-Tac-Toe activities to complete.

Follow-up:

- Each group will present their findings or projects to the class.
- At the conclusion of all activities, students will reflect upon the lesson in a journal entry format addressing what they have learned, the activities that were most effective, and whether or not they will recycle in the future.
- Individually, students will complete Graphing Lesson 3 on the *Neufeld Understanding Mathematics* program.
- Students who have not mastered measures of central tendency and graphing will complete activities on these concepts within their individualized Paths in the *Compass Learning* program.

- Tic-Tac-Toe projects will be assessed using a rubric.

Resources:

- *United Streaming: Enviro Tackle Box Module 2: Decisions Based on Science Tackle Trash*
- *Brain Pop: Recycling*
- Internet sources:
Retrieved from the following sites on December 11, 2005:
<http://www.epa.gov/epaoswer/non-hw/muncpl/recycle.htm>
<http://www.zerowasteamerica.org/Statistics.htm>
http://www.kab.org/kids/pizza_intro.htm
<http://www.anchoragerecycling.com/alumfact.htm>
http://www.container-recycling.org/plastic_rates.htm
- Software programs:
Microsoft Office
Neufeld Understanding Mathematics
Compass Learning
activBook Reader
Excel
Power Point