Subject: Mathematics   Grade: First

Standard: #8 Statistics and Probability

Key Concept: Use data analysis and probability to analyze situations and outcomes
                of experiments.

Generalization: Students collect data and make, describe, and interpret picture graphs
                then decide what is mostly likely to happen from the graph.

Background:
    Before beginning this activity, students have previously collected and organized
    information about a topic, such as pets. They have also performed at least one
    experiment to determine what is mostly likely to happen.

    Students choose a tier according to interest (favorite movie, ice cream, song,
    candy bar, sports figure, school lunch, dessert, fast food restaurant, etc.). Each
    tier should consist of three students. Each tier will collect data from all the
    students in the class on their topic of interest. An alternative approach would
    be to collect the data as a whole class once the topics of interest have been
    identified. You may want to limit the number of choices for topics to control
    for the number of groups or to have several groups explore the same topic and
    then make comparisons.

This lesson is tiered in ***content*** according to ***interest***.

Tier I: ***Favorite School Lunch***
Tier II: ***Favorite Movie***
Tier III: ***Favorite Song***
Tier IV: ***Favorite Ice Cream Flavor***
Tier V: ***Favorite Candy Bar***
Tier VI: ***Favorite Sports Figure***

Once the data has been collected and recorded, each tier will complete the following

activities with respect to their topic:

Make a picture graph of the data on poster board.

Describe and interpret the results.

Predict/decide what is mostly likely to happen from the graph. That is, what response would they expect to get from a first grader from another class.

Assessment:

Teacher may choose to assess the groups using observation as they complete the activity or after completion look for accurate representation of the data, correct descriptions and interpretations of the results, as well as correct predictions. It may be most appropriate to use both forms of assessment.

In a whole group discussion, have students share their results with the whole class in a mini-report type style.

An extension of this lesson, would be to have the students collect data from more than one first grade class and compare the results or collect data from a second grade class and compare the results. Also, the posters would be appropriate to display in the classroom or in the hall way.