

E41d drawing reasonable conclusions based on data

E42 describe a set of data

E42a high and low values, and range

E42b most frequent value (mode)

E42c middle value of a set of ordered data (median)

E44 Determine if future events are more, less, equally likely, impossible or certain to occur

E45 Predict outcomes of future events and test predictions using data from a variety of sources

## Graph Work

Materials needed: Graph paper

Points of interest: Taking surveys

Previous Knowledge: Grace/Courtesy Lesson on how to approach people

Procedure:

1. Invite a group of students to lesson on taking surveys and making graphs
2. Pick a subject to survey: Favorite food
3. Ask students their favorite food.
4. Write down how many people liked each food.
  - a. Use tally marks (may require a mini-lesson on how to.)
  - b. Ex: Chicken II, Pizza: IIII, Broccoli: I, Ice Cream: II etc.
5. Now that we have our information we are ready to make a graph. 1<sup>st</sup> we need graph paper. Draw in X and Y axis on square from the edge
6. What was the survey about? (Favorite Food) – That will be the title of the graph.
7. What were the foods that were liked? (Chicken, Pizza, Broccoli, Ice Cream). Those will go on the X axis (or bottom line of the graph)
8. What was the most like food? (Pizza) How many people liked pizza? (4 That is how many people we want on our Y axis.
9. Now fill in the graph with the numbers.
10. After, on another sheet of paper or on the side/bottom of this paper write what you discovered.
  - a. Broccoli was least liked.
  - b. Pizza was most liked
  - c. The same amount of people like Chicken as like Ice Cream.

Extensions/Variations:

- If interviewing more people, show how each square can equal 2 instead of 1 or 5 instead of 1
- Do it without the survey –
  - a. Rolling a dice – predict which number will get the most rolls
  - b. Flip a coin – predict which will get more (probability)
- Introduce vocabulary of mean, median, mode and range.