Tips for Helping at Home

- Questions to ask:

    What is it that you don't understand (have the student be specific)?

    What about putting things in order?

    Could you try it with simpler numbers?

    Can you guess and check?

    Does this make sense?

    What can you do to explain your answer to show others what you are thinking?

    Does your answer seem reasonable?

- Try to notice ads and articles with headlines like "three out of four doctors prefer Brand X pain reliever" or "1/2 of all Americans don't get enough sleep." Talk to your child about these ads. "What does three out of four mean? What fraction is it? If there were 20 doctors, about how many of them would prefer this pain reliever? How do you think this data was collected?"

- As we work with fractions and data, the children will be making pictures and diagrams using strips of paper they divide into fractions, and working with other materials. When you work at home with your child, suggest that he or she use pictures and objects to help solve problems.

- Encourage your child to explain his or her strategies for making sense of data.

Mathematical Emphasis

Investigation 1—Using Fractions to Describe Data

- Finding familiar fractions of a group

- Estimating complex fractions with familiar fractions

- Describing data in terms of fractions

- Using fractions to compare data from two groups

- Recognizing that fractions are always fractions of a particular whole

Investigation 2—Looking at Data in Categories

- Collecting and recording categorical data

- Organizing data into categories and making judgments about sets of categories

- Representing categorical data, including use of bar graphs

- Describing categorical data

- Using fractions to compare categorical data from two groups

Websites

http://cms.everett.k12.wa.us/math

Investigations
in Number, Data, and Space

Grade 4

Three Out of Four Like Spaghetti

Data and Fractions

Everett Public Schools

Vocabulary

Data: Information collected about people or things

Comparisons: statements of similarities and differences

Fraction: a number that names part of a whole or a group

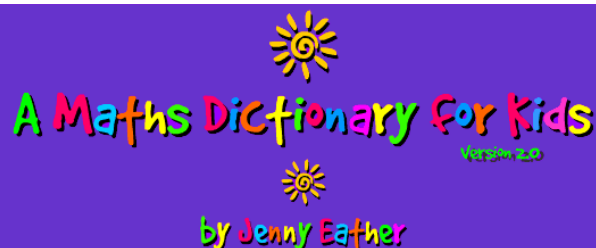Categories: groups or sets of things that are classified together because of similar characteristics

Organize: put together in a logical pattern

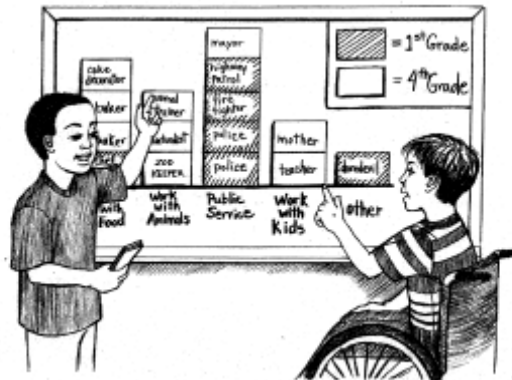Scale: The numbers placed at fixed distances on a graph to help label the graph

Likely: Having a greater than even chance of happening

Glossary

http://www.amathsdictionaryforkids.com/

A Maths Dictionary for Kids
Version 2.0
by Jenny Eather

Looking at data in categories.

When discussing your child's work in creating graphs, writing conclusions, and comparing data, consider asking some important questions.

Are the categories reasonable and clearly defined?

Do the child's categories help him/her to understand the data?

Can the child find and describe interesting aspects of the data?

Is the child able to use fractions to describe and compare the data?

Can the child clearly explain why one fraction is larger than another?

Berle-Carman, Mary. Investigations in Number, Data, and Space: Three out of Four Like Spaghetti. Dale Seymour Publications, 1998.

Game

Guess My Rule is a classification guessing game in which players try to figure out the common characteristic, or attributes, of a set of objects. To play the game, the rule maker (parent or student) decides on a secret Mystery Rule. For example, classification rules for books might be all the books where the main character is a boy, or all books about horses.

The rule maker starts the game by giving some examples of objects which fit the rule-for example, showing two books with boys as the main characters. The rule must be something you can see. The guessers then try to find other objects which might fit the rule: "Would Lemony Snicket fit your rule?"

With each guess, the rule maker must place the object into the group that does fit the rule or the group that does not fit the rule.

Wrong guesses are just as important as right guesses.

When you think you know what the rule is, test your theory by giving another example.