Data About Us

Glossary

Categorical Data – Values that are words that represent possible responses within a given category.

-months of the year in

which people have birthdays .

Data – Values such as counts, ratings measurements, or opinions that are gathered to answer questions.

Mean – A value calculated from data. In a given set of numbers, add the numbers and divide by the numbers of that set. *Often referred to as the Average.*

Median – When the numbers are arranged least to greatest, it is he middle value of a numerical set. Half the data appears above the median, half the data appears below the median.

Mode – Of a distribution, it is the numerical value that appears most often. It is possible to have more than one mode

Outlier – One or more values that lie "outside" the distribution of the data. It may be questioned because it is unusual or may have been misreported

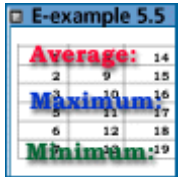
Range – The range of a distribution is computed by stating the highest and lowest values. Less frequently it is computed by finding the difference between the highest and lowest values.

Web Resources

You will find web resources at:

www.illuminations.nctm.org

Collecting, Representing and Interpreting Data



Ex-

ploring Histograms

Everett Public Schools

Connected Mathematics Project

Everett Public Schools Mathematics Program

Data About Us

Statistics

Unit Goals:

- **Engage in the process of data investigation, posing questions, collecting data, analyzing data, and interpreting the data**
- **Represent data using line plots, bar graphs, stem-and-leaf plots, and coordinate graphs**
- **Measure of central tendency, mean, median, mode and range**
- **Compare and describe data sets**

Proposed Time Frame:
Approximately 6 weeks

Mathematics in Investigations

Investigation 1 Looking at Data

* Use tables, line plots and bar graphs to display data
* Use measures of central tendency to describe a set of data
* Describe the shape of the data

Investigation 2 Types of Data

* To note the kind of data being collected; that is, categorical or numerical

Investigation 3 Using Graphs to Group Data

* To use stem-and-leaf plots to group numerical data intervals
* To use ordered data in a stem plot to locate measures of central tendency
* Describe shape of data, including clusters and gaps, determine what is typical

Investigation 4 Coordinate Graphs

* Implement the process of statistical investigation to answer questions
* Review the process of measuring length, time and distance
* Analyze data by using coordinate graphs to explore relationships among variables

Investigation 5 What Do We Mean by *Mean?*

* Understand the mean as a number that "evens out"
* Find the mean of a set of data
* Distinguish between mean, median, and mode as ways to describe what is typical about a set of data

Unit Project
Is Anyone Typical?

A statistical investigation that involves posing questions, collecting data, analyzing data and interpreting the results of the analysis.

Tips for Helping at Home

Good questions and good listening will help children make sense of mathematics and build self-confidence. A good question opens up a problem and supports different ways of thinking about it. Here are some questions you might try, notice that none of them can be answered with a simple "yes" or "no".

Getting Started

* What do you need to find out?
* What do you need to know?
* What terms do you understand or not understand?

While Working

* How can you organize the information?
* Do you see any patterns or relationships that will help solve this?
* What would happen if…?

Reflecting about the Solution

* How do you know your answer is reasonable?
* Has the question been answered?
* Can you explain it another way?

At Home:

1 Talk with your child about what's going on in mathematics class.

2 Look for ways to link mathematical learning to daily activities. Encourage your child to figure out the amounts for halving a recipe, estimating gas mileage, or figuring a restaurant tip.

3 Encourage your child to schedule a regular time for homework and provide a comfortable place for their study, free from distractions.

4 Monitor your child's homework on a regular basis by looking at one problem or asking your child to briefly describe the focus of the homework. When your child asks for help, work with them instead of doing the problem for them.

At School

1 Attend Open House, Back to School Night, and after school events.

2 Join the parent-teacher organization

Connected Mathematics Project

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