

Mathematical Emphasis

Investigation 1 - Sorting People and Yekttis

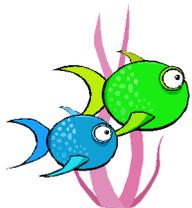
- Examining carefully the differences and similarities in a group of related objects or related data
- Using negative information to clarify the definition of a category
- Sorting and classifying information
- Collecting, recording, and representing data
- Using more than one representation to view data
- Using Venn diagrams to show various relationships within a group of related objects

Investigation 2 - Collections: What Goes Together?

- Thinking flexibly about the characteristics of data
- Articulating logical reasoning
- Constructing categories with clear definitions for describing categorical data
- Inventing representations of data
- Building theories about the data

Investigation 3 - Animals in the Neighborhood

- Constructing categories to describe data
- Articulating clear definitions of categories
- Organizing categorical data



Tips for Helping at Home

- Questions to ask:
 - What is it that you don't understand (have the student be specific)?
 - What information do you need?
 - What strategies are you going to use?
 - 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?
- For homework your child will be playing Guess My Rule with about 20 household objects. Your child will teach you and other family members this game. Guess My Rule is also fun to play with a large group of people.
- Your child might be interested in working with our sink-and-float experiment at home. Ask your child to explain this experiment to you and, if possible, together investigate other objects that sink and float.
- Your child will also be collecting some information from you that will become part of a set of data that we will be using in the classroom. You might need to help your child write this information.
- Finally, as you are reading the newspaper or watching the news, point out graphs and charts to your child. We live in an information-rich society, and it is important for students to begin to experience the variety of ways that information is communicated and represented in the world.



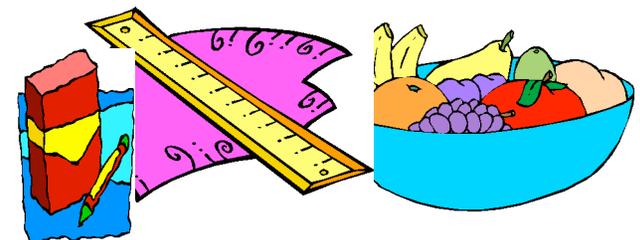
GAME Guess My Rule with Thing Collections

• **Materials:** a Thing Collection made of 15-20 small objects that are all different from each other, such as a spoon, a penny, a crayon, and paper clip, a safety pin, a small block, a birthday candle, and so on.

• **How to play:**

The object of the game is to figure out the Mystery Rule by trying to place objects from the Thing Collection into one of two categories.

1. The rule maker decides on a Mystery Rule for sorting the Thing Collection into two groups: one group that fits the rule and one group that doesn't fit the rule. For example, a rule might be "made of plastic" or "is red."
2. The rule maker starts the game by showing three objects that fit the rule and two objects that do not fit the rule.
3. The guessers try to find other objects that fit the rule.
4. With each guess, the object is placed in one of two piles: "fits the rule" or "does not fit the rule." Both piles should be clearly visible. The rule maker says if a placement is correct. If it is not, the object is placed in the correct group.
5. Guessers continue to place objects in the two piles. Once all the objects have been correctly sorted, the guessers guess the rule.



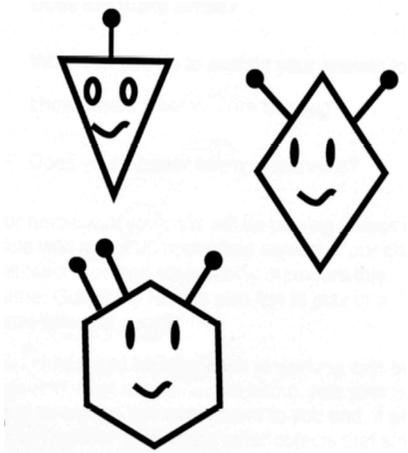
Vocabulary for Parents

Data - information about people or groups of objects

Representation - graph, picture or chart that shows how a collection was sorted

Categories - organizing objects or people by a theme

Yektti - figures that can be sorted by shape, eyes, or antennae



Web Sites

<http://www.investigations.scottforesman.com/pdfs/parentpage.pdf>

<http://www.everett.k12.wa.us/math/Second%20Grade>

<http://www.amathsdictionaryforkids.com/>

About the Mathematics In This Unit

In this unit, your child will collect data and learn about sorting and classifying data. Once data are collected, they have to be organized in some way so that they can be analyzed and compared. Children begin the unit by playing Guess My Rule - a game in which they analyze data and try to figure what is alike.

Children continue the unit with data collecting projects. They collect data about objects that sink and float, about what animals can be found in the neighborhood, and in what ways these animals move about. Children will invent ways of organizing and presenting the data they collect and also use some traditional ways such as making graphs and drawing pictures.



Does it Walk, Crawl, or Swim?

Grade 2

Sorting and Classifying
Data



Russell, S. Investigations in Number, Data and Space: Does It Walk, Crawl, or Swim?

Dale Seymour Publications, 1998

State College Area School District