

Tips for Helping at Home

- Have your child help with sorting activities such as the laundry, items for recycling, groceries, hardware, and spare change.
- If your child collects something, you might work together to organize or sort the collection.
- When children are gathering data about ages of people in their families, talk with them about who's older than they are, and by how much. Encourage your child to figure out different strategies for comparing or adding up.

How to help when your student gets stuck. . .

- What do you need to find out? (student should be specific)
- What information do you have?
- What strategies are you going to use?
- Does that make sense?
- How do you know?
- How did you get an answer?
- Does your answer seem reasonable?
- What else is there to do?

Web Resources

You will find web resources at:

<http://www.dreamsbeginhere.org/static/aboutdcps/departments/acadprog/mathematics/index.asp>

<http://mathforum.org/students>

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

Mathematical Emphasis

Investigation 1

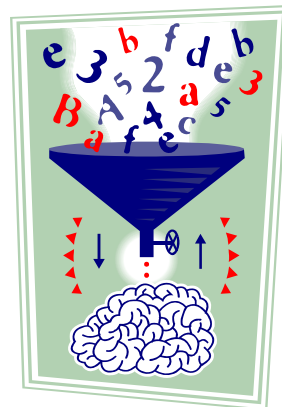
- * Identifying and describing attributes of various materials
- * Using an attribute as a basis for sorting and categorizing a variety of objects
- * Developing strategies to guess someone else's sorting rule
- * Creating representations of sorted sets of objects

Investigation 2

- * Make a plan for gathering and recording data
- * Sorting and categorizing data
- * Inventing and constructing data representations
- * Explaining and interpreting results of surveys
- * Presenting data to others in a way that communicates information clearly

Investigation 3

- * Becoming familiar with calendar features
- * Grouping and describing data about birthdays
- * Ordering data about birthdays



Duval County Public Schools



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Investigations in Number, Data, and Space



Survey Questions and Secret Rules Grade 1

Collecting and Sorting Data

Unit Goals:

- Students identify and describe attributes of objects, such as color, size, and shape.
- Students sort and categorize objects.
- Students create representations based on their rule for sorting.
- Students collect data about themselves
- Students compare two sets of data.

Proposed Time Frame:

4 weeks

Vocabulary

- **sorting**—putting items into like groups
- **similar**—an attribute that is alike in 2 or more objects
- **differences**—an attribute which is different from others
- **attributes**—characteristics of an object
- **more than**
- **less than**



What is a representation?

It's a form of communication that students need to learn as a part of data analysis; put simply, in the words of one student, "It shows the data." There are standard forms of data representation: charts, tallies, line plots and bar graphs. There are also many unusual forms of graph and diagrams.

So, how do students "show the data?" For the activities in this unit, we encourage students to invent their own methods. When students invent their own ways of representing their data they often come up with wonderfully individual pictures or graphs that powerfully communicate the meaning of data.

Wright, Tracey. *Investigations in Number, Data, and Space: Survey Questions and Secret Rules*. Dale Seymour, 1998.

On and Off Game Grid

Total Number _____

ON	OFF

Game

On and Off

Materials: Counters (8–12)
On and Off game grid
Sheet of paper

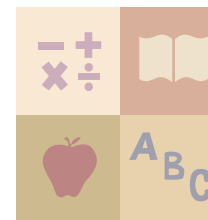
Players: 1–3

Object: Toss counters over a sheet of paper. Record how many land on and off the paper.

How to Play:

1. Decide how many counters you will toss each time. Write this number on the game grid.
2. Lay the sheet of paper on a flat surface.
3. Hold the counters in one hand and toss them over the paper.
4. On the game grid, write how many landed on the paper and off the paper.
5. Repeat steps 3 and 4 until you have filled the game grid. (Take eight tosses.)

Optional: Your filled game grid shows different ways to break the total number into two parts. Can you find a way that is not shown?



Glossary

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

