

## Mathematical Emphasis

### Investigation 1 - 10's and Doubles

- Developing familiarity with 10 as an important number in our number system
- Becoming familiar with number combinations of 10 and doubles
- Developing strategies for adding two or more numbers

### Investigation 2 - Grouping by 2's, 5's and 10's

- Developing counting strategies
- Exploring patterns and developing fluency in skip counting by 2's, 5's, and 10's
- Exploring 5 and its multiples
- Becoming familiar with the relationship between skip counting and grouping

### Investigation 3 - Introducing Addition and Subtraction Situations

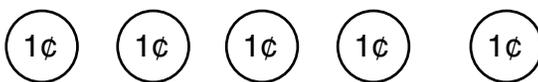
- Developing models of addition and subtraction situations
- Solving problems using numerical reasoning
- Recording solution strategies clearly
- Considering the relationship between addition and subtraction

### Investigation 4 - One Hundred

- Becoming familiar with the structure of 100
- Working with 100 as a quantity
- Using the 100 chart as a tool for combining and comparing quantities
- Using familiar addition combinations to find totals

## 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?
- If you have a penny jar at home suggest that your child count out a handful of pennies. In school students are encouraged to check their count by counting a second time in a different way (by 2's or 5's). Your child might compare his or her handful of pennies to your handful.



- Ask your child to count the change in your pocket. We have been working mostly with pennies, nickels, and dimes, so you might want to have your child count only these coins at first.
- If your child goes to the store with you and you are using a coupon, point out how much each coupon is worth and if possible show your child the amount using coins.



## GAME Close to 20

- Materials: One deck of Number Cards 0 - 10 (four of each) with the wild cards removed; score sheet; counters
- Players: 2 to 3
- Object: To choose three cards that total as close to 20 as possible.
- How to play:
  1. Deal 5 cards to each player.
  2. Take turns. Use any three of your cards to make a total that is as close to 20 as possible.
  3. Write these numbers and the total on the score sheet.
  4. Find your score. The score for the round is the difference between the total and 20. For example, if you choose  $8 + 7 + 3$ , your total is 18 and your score for the round is 2.
  5. After you record your score, take that many counters.
  6. Put the cards you used in a discard pile and deal three new cards to each player. If you run out of cards before the end of the game, shuffle the discard pile and use those cards again.
  7. After five rounds, total your score and count your counters. These two numbers should be the same. The player with the lowest score wins.

### Score Sheet example:

Score:

Round 1: \_\_\_ + \_\_\_ + \_\_\_ = \_\_\_    \_\_\_  
Round 2: \_\_\_ + \_\_\_ + \_\_\_ = \_\_\_    \_\_\_  
Round 3: \_\_\_ + \_\_\_ + \_\_\_ = \_\_\_    \_\_\_  
Round 4: \_\_\_ + \_\_\_ + \_\_\_ = \_\_\_    \_\_\_  
Round 5: \_\_\_ + \_\_\_ + \_\_\_ = \_\_\_    \_\_\_  
Total Score: \_\_\_\_\_

## Vocabulary for Parents

**Equation** - a mathematical sentence where the right side of the equals sign has the same value as the left

example:  $3 = 2 + 1$

**Expression** - one or more numbers and/or operation symbols

**Multiple** - numbers landed on when skip counting by a specific number

example: Some multiples of 5 are 10, 15, 20, 25, etc. . .

**Number string** - addition problem with more than two addends.

examples:  $2 + 9 + 1 + 2 =$



$$\begin{array}{r} 5 + 6 + 4 + 10 + 5 = \\ \hline 10 + 10 + 10 = 30 \end{array}$$

### 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 learn how numbers are made from other numbers, 20 can be made from 10 and 10 or from four 5's or from ten 2's. Being able to take numbers apart and put them back together flexibly is the basis for developing good number sense.

First we will work with addition combinations, exploring combinations of 10 ( $4 + 6$ ,  $2 + 8$ ) and doubles ( $4 + 4$ ,  $5 + 5$ ). We will then use these addition combinations to learn others. The goal is for children to become familiar with number combinations through repeated use and by learning about relationships among numbers.

In the second half of the unit your child will be working with numbers such as 5, 10, 15, 20, 25, 50 and 100. Activities include using coins to find different ways to make 25¢ and figuring how to save 50¢ at the grocery store using combinations of coupons. Students will also work on story problems for which they will use addition and subtraction to solve.



Economopoulos, K. Investigations in Number, Data and Space: Coins, Coupons, and Combinations.

Dale Seymour Publications, 1998



## Coins, Coupons and Combinations

### Grade 2

#### The Number System



State College Area School District