Name _____ Class _____ Date _____

Exploring Probability

Dear Family,

These activities provide an opportunity for you and your child to share knowledge of mathematics. I invite you to choose one or two activities and complete them together. Please have your child return the family project(s) to me by _____.

Materials: 2 number cubes • 2 pennies, nickels, dimes, or quarters • 5 pairs of socks (each pair a different color or pattern) • paper bag • paper • pencil

Odd-Even Sums

Play the game Odd-Even Sums with one or more family members. Have each player choose to be "odd" or "even." Each player takes a turn tossing the number cubes and finding the sum of the two numbers tossed. If the sum is odd and the player chose "odd," the player scores one point. If the sum is even and the player chose "even," the player scores one point. Keep track of the scores on a sheet of paper. The first player to get ten points wins the game. Play the game at least three times.

Did "odd" or "even" players win more games? Were the scores close? Is this a fair or unfair game? Explain why. Finally, make a table of the possible sums for this game. How can the table be used to decide whether this is a fair game?

Match Game

Have family members work as two teams: the "match" team and the "no match" team. Have a member from one team toss both coins at once. If both coins come up heads, then the "match" team scores a point. If not, then the "no match" team scores a point. Take turns tossing the coins. Make a chart to keep track of each team's points. The first team to score 20 points wins.

Then discuss with family members which team each member would want to be on, "match" or "no match." Why? Finally, discuss why the game is fair or unfair.

Sack of Socks

Make a chart that lists the color or pattern of 5 pairs of socks. Place 5 pairs of socks (10 socks total) in a paper bag. Have family members take turns removing 2 socks from the bag. Record each turn on the chart showing which socks were removed. Return the socks to the bag after each turn. Have each family member take at least four turns.

Discuss with family members the probability that a matching pair of socks would be removed. How often did it occur when you played the game? Finally, discuss with family members how you could improve the probability of removing a matching pair of socks.

What Do You Think?

Please take a few moments to let me know how you enjoyed these activities. Write your comments on the back of this sheet and have your child return it to me by _____.