



## About the Mathematics in This Unit (page 1 of 2)

Dear Family,

Our class is starting a new mathematics unit about data and probability called *How Long Can You Stand on One Foot?* During this unit, students collect, represent, describe, and interpret data. Students also look at the probability of various events.

Throughout the unit, students work toward these goals:

BENCHMARKS/ GOALS	EXAMPLES
Describe major features of a set of data represented in a line plot or bar graph, and quantify the description by using the median or fractional parts of the data.	<p>How many years have 5th-graders been at this school?</p> <p style="text-align: center;">Number of Years</p> <p>Most of the data are in two clumps. Almost half (<math>\frac{9}{21}</math>) have been here 1 or 2 years, and an equal number have been here for 5 or 6 years. Only one person (the teacher) has been at this school for 8 years.</p>

(continued)



**How Long Can You Stand on One Foot?**

**Family Letter**

**About the Mathematics in This Unit** (page 2 of 2)

BENCHMARKS/ GOALS	EXAMPLES																						
<p>Draw conclusions about how two groups compare based on summarizing the data for each group.</p>	<p>Which coin will spin longer, a penny or a quarter?</p> <p style="text-align: center;"><b>Spinning Coins</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Spinning Coins</caption> <thead> <tr> <th>Number of Seconds</th> <th>Penny</th> <th>Quarter</th> </tr> </thead> <tbody> <tr> <td>1 to 5</td> <td>3</td> <td>1</td> </tr> <tr> <td>6 to 10</td> <td>2</td> <td>2</td> </tr> <tr> <td>11 to 15</td> <td>3</td> <td>3</td> </tr> <tr> <td>16 to 20</td> <td>3</td> <td>2</td> </tr> <tr> <td>21 to 25</td> <td>1</td> <td>3</td> </tr> <tr> <td>26 to 30</td> <td>1</td> <td>2</td> </tr> </tbody> </table> <p>The data shows that overall, quarters spin longer than pennies. About half (7 out of 13) of the quarters spun for more than 15 seconds. Almost all (11 out of 13) of the pennies spun for 20 seconds or less.</p>		Number of Seconds	Penny	Quarter	1 to 5	3	1	6 to 10	2	2	11 to 15	3	3	16 to 20	3	2	21 to 25	1	3	26 to 30	1	2
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<p>Design and carry out an experiment in order to compare two groups.</p>	<p><b>Question:</b> Which paper bridge design will hold the most weight?</p> <p><b>Materials:</b> paper, books, pennies</p> <p><b>Procedure:</b> Choose two different paper bridge designs to compare. Place the bridge across the “valley” between two piles of books. See how many pennies the bridge holds before it collapses.</p>																						
<p>Use a decimal, fraction, or percent to describe and compare the theoretical probabilities of events with a certain number of equally likely outcomes.</p>	<p>What is the probability of landing on a space marked “B” when spinning this spinner?</p> <p>2 of the 4 equal spaces are marked “B,” so the probability is <math>\frac{2}{4}</math>, or <math>\frac{1}{2}</math>, or 50%.</p>																						

Please look for more information and activities about *How Long Can You Stand on One Foot?* that will be sent home in the coming weeks.