



Multi-Colored Dice

STEM Sims

Lesson 2: Rolling Dice to Make a Sample Space

Dice rolling is a common game found in many casinos across the country. In this lesson you'll study how in the long run, rolls of dice result in highly predictable outcomes. Get ready to roll them bones.

Doing the Science

- The figure below is set up for a sample space for rolling a pair of dice and then adding the numbers on the top faces. Please complete the diagram by adding the number on a row with the number above a column. Some additions, such as $1 + 1$ and $2 + 4$, have been completed for you.

	1	2	3	4	5	6
1	2					
2				6		
3						
4				8		
5	6					
6						12

Do You Understand?

- How many total cells are in the diagram? _____
- How many cells have a 7 in them? _____
- What is the probability of rolling a 7? _____
- What is the probability of rolling a number that is less than 12? _____
- What is the probability of rolling a number that is greater than 1? _____
- How many different ways can you roll a 7? _____
- How many different ways can you roll a 12? _____
- What are some possible implications for casino games involving the rolling of dice given the results from the sample space you created for dice rolling?