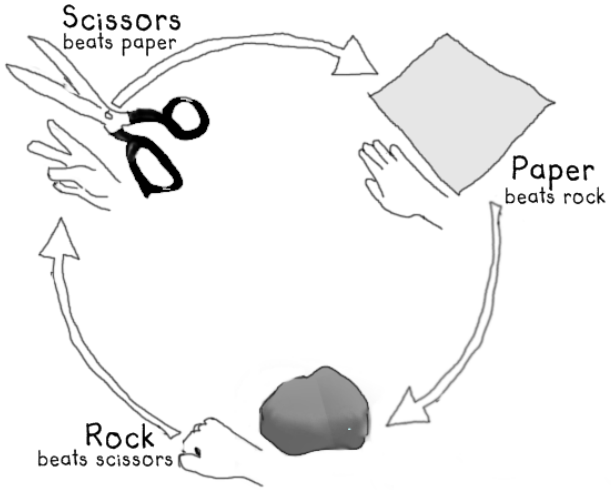
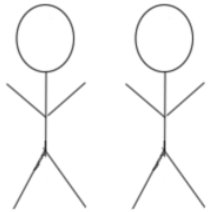
Zoe and Corbin are making a project for class.



What is the sample space of playing Rock, Paper, Scissors?

In this lesson you will learn how to describe a sample space by organizing the set of all possible outcomes.

Let's Review

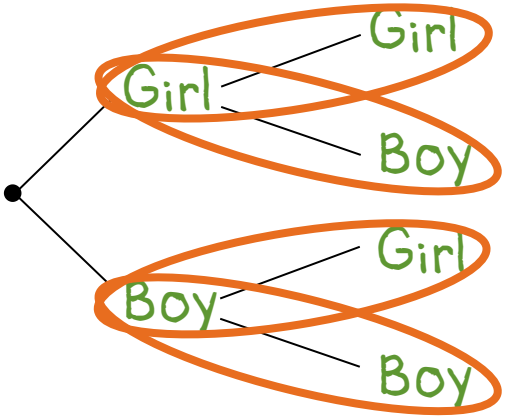


Outcomes/Results

Table

	Girl	Boy
Girl	GG	GB
Boy	BG	BB

Tree



Organized List

(Girl, Girl)
(Girl, Boy)

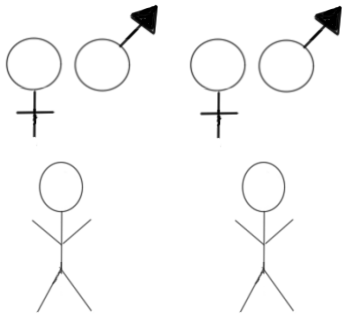
(Boy, Girl)
(Boy, Boy)

Let's Review

Fundamental Counting Principle:

If there are a ways for one activity to occur, and b ways for the second, then there are a x b combinations.

2 x 2 = 4 outcomes



Let's Review

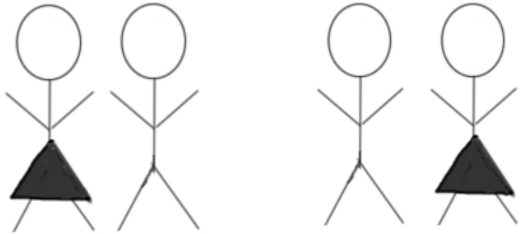
Probability:

$$\frac{\text{number of ways an event can occur}}{\text{total possible outcomes}}$$

	Girl	Boy
Girl	GG	GB
Boy	BG	BB

P(both children are same gender) = $\frac{2}{4}$

A Common Misunderstanding



(G,B) ≠ (B,G)

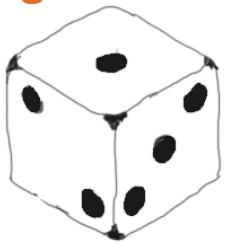
(1st child, 2nd child)

Core Lesson

What is a sample space?

The set of ALL possible outcomes.

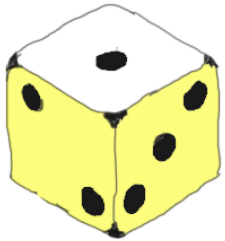
Regular Die



{1, 2, 3, 4, 5, 6} → Uniform

=

Weighted Die



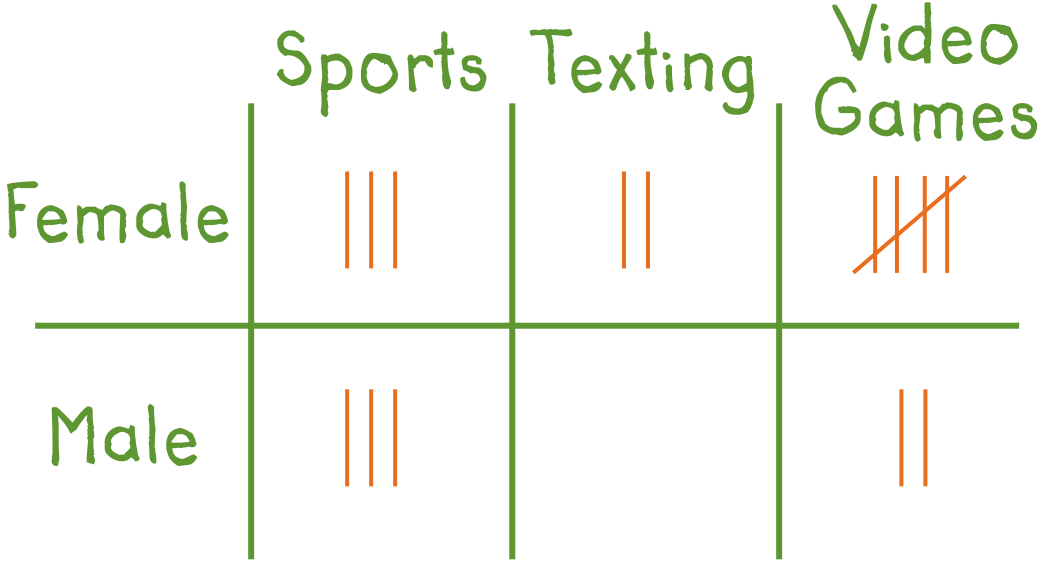
{1, 2, 3, 4, 5, 6} → Non-uniform

≠

LEARNZILLION

Core Lesson

Which of the following activities do you spend the most time on after school?



Core Lesson

	Sports	Texting	Video Games	
Female	3	5	2	10
Male	3	2	5	10
	6	7	7	20

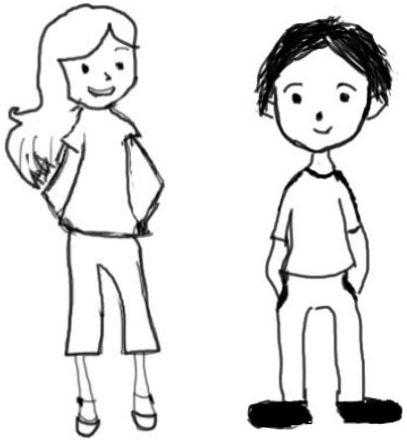
$2 \times 3 = 6$ outcomes

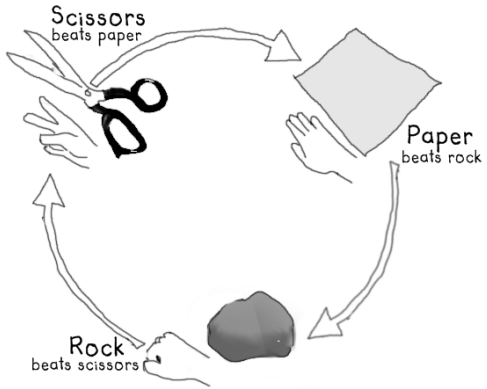
{(F,S), (F,T), (F,V), (M,S), (M,T), (M,V)}

Core Lesson

Zoe and Corbin are making a project for class.

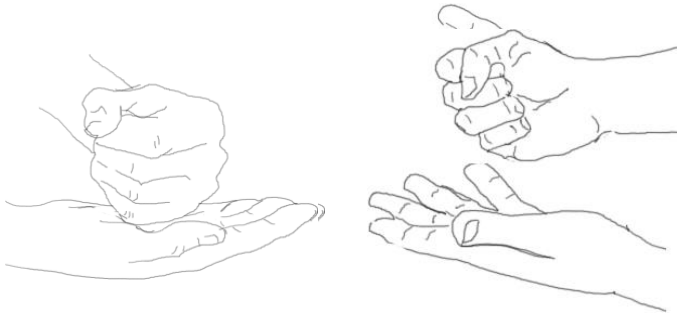
What is the sample space of playing Rock, Paper, Scissors?





Core Lesson

Zoe Vs. Corbin



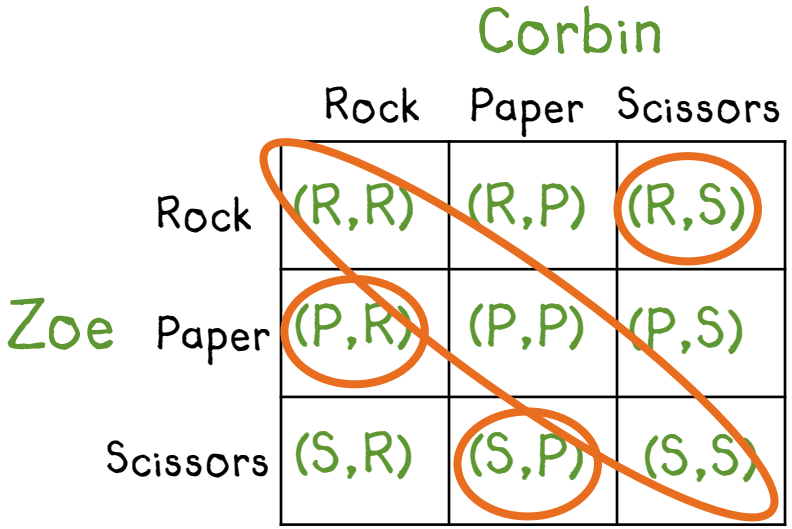
(R,S)

Zoe \ Corbin	Rock	Paper	Scissors
Rock	(R,R)	(R,P)	(R,S)
Paper	(P,R)	(P,P)	(P,S)
Scissors	(S,R)	(S,P)	(S,S)

3 x 3 = 9 outcomes

Core Lesson

Find the probability that Zoe will not have to present.



$$P(\text{Zoe Wins}) = \frac{1}{3}$$

$$\approx 33.\overline{3}\%$$

In this lesson you learned how to describe a sample space by organizing the set of all possible outcomes.