## Sample Space Activity

## Dice

1 Die: List all the possible results of tossing 1 Die.
How many possible results are there when rolling 1 Die?
List all the possible results that are divisible by 3.
Use the ratio below to find the probability of tossing a number divisible by 3.

$$
\frac{\text { favorable }}{\text { total }}\left(\frac{\text { results divisible by } 3}{\text { total number of possible results }}\right)=
$$

2 Dice: Complete each table.
Possible Combinations
for 2 Dice

|  | 1 | 2 | 3 | 4 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $(1,1)$ | $(1,2)$ |  |  |  |  |
| 2 | $(2,1)$ |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |

Possible Sums
for 2 Dice

|  | 1 | 2 | 3 | 4 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 |  |  |  |  |
| 2 | 3 |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |

How many results are there for "Possible Combinations for 2 Dice?" $\qquad$

How many results are there for "Possible Sums for 2 Dice?"
One possible COMBINATION for rolling a sum of 6 with 2 Dice is (1,5). List all other possible COMBINATIONS:

How many results have a SUM of 5? $\qquad$

The probability of rolling a SUM of 5 with 2 dice is:

## GETTING TO KNOW WHAT IS IN A DECK OF CARDS

Jokers are NOT a part of a standard deck of cards. Below are the symbols used and are called "suits".


## DECK

How many cards are in a deck? $\qquad$

How many of each type of card?

## SUITS

How many suits are there?

How many cards are in a suit? $\qquad$

What are the names of the suits?

Which suits are red? $\qquad$

Which suits are black? $\qquad$

How many red cards in the deck?

How many black cards in the deck?

How many cards have the number 5 ?

TYPES OF CARDS
FACE CARDS (Cards with Faces)

How many face cards are there?
What the names for the face cards?

How many face cards in a suit? $\qquad$

NUMERICAL CARDS (Cards with Numbers)

How many numerical cards are there? $\qquad$

How many numerical cards in a suit?

How many cards have the number 5 ? $\qquad$

How many cards have the number 7 ? $\qquad$

ACES (Not a Face Card, Not a Numerical Card)

How many Aces in the deck?
Some games with Cards associate values to cards... like Black Jack an Ace is either a 1 or an 11 - For our purposes an Ace is simply an Ace and has NO VALUE. You will just need to know the cards for what is physically on the card

## Coins

List all of the possible outcomes when flipping 1 coin:
List all of the possible outcomes when flipping 2 coins:
Half of the possible outcomes for flipping 3 coins are listed in the table below. Copy them into your spiral and fill in the missing outcomes.

Outcomes for
Flipping 3 Coins

| HHH |  |
| :--- | :--- |
| HHT |  |
| HTH |  |
| THH |  |

Copy and complete the table below using the information from above. If needed, write out all the outcomes in the space below just like you did in the example above.

| \# of <br> Coins | \# of Possible <br> Outcomes |
| :---: | :---: |
| 1 | 2 |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

bill@hanlonmath.com

