

# Games: An Introduction to Probability

MDM 4U1

Mr. Boulton & Mr. Gallant



## ABSTRACT

Students will play several different games involving probability in rotation during the period.

## Table of Contents

<b>Games.....</b>	<b>3</b>
Station 1: War of Cards.....	3
Station 2: Count the Tails.....	3
Station 3: Rock, Paper, Scissors .....	3
Station 4: Piggy.....	4
Station 5: Racing.....	4
Station 6: Two Bits.....	4
Station 7: Dice Wars.....	5
Station 8: Pick a Card, Any Card.....	5
Station 9: Spinner.....	5
<b>Score Keeping .....</b>	<b>6</b>

---

## GAMES

---

### STATION 1: WAR OF CARDS

#### Instructions

1. To start the game, the Red Devils get the red cards; the All-Blacks get the black cards.
2. The Red Devils place one of their cards face up on the table; then, the All-Blacks place one of their cards face up on the table.
3. The team with the higher card wins the round, and puts both cards in their “reserve” pile – these reserve cards cannot be used until the team runs out of cards in their hand.
4. In the event of a tie, each team places another card on the table face up – the winning team then claims the cards involved in that round.

### STATION 2: COUNT THE TAILS

#### Instructions

1. In this game, you keep flipping a coin until a “heads” appears. Your score is the number of “tails” that occur prior to a “heads”. If your first flip is a “heads”, too bad – you get a zero for that turn.
2. Each team gets three turns – the winner is the team with the highest cumulative score.
3. Red Devils – you get first turn.

### STATION 3: ROCK, PAPER, SCISSORS

#### Instructions

1. As a team, you must decide what symbol you will use – remember, scissors cut paper, paper covers rock, and rock breaks scissors.
2. On the count of three, both teams reveal their symbol.
3. Play a best of fifteen match.

## STATION 4: PIGGY

### Instructions

1. The objective of the game is to be the first team to reach 33 (or greater).
2. Each turn consists of rolling a six-sided die and adding the sum rolled to the team's total for that turn. You can stop a turn at any time and bank your points. Be careful, though – if you roll a 6, your turn comes to an end and no points go in your bank.
3. Example of play: Nupur rolls a 3, then a 4, and a 1. She stops her turn, and puts 8 points in her bank. Karen rolls a 5, and then a 6. Because of the 6, no points go in Karen's bank and her turn is over. On her second turn, Nupur rolls a 5 and stops her turn, putting 5 points in her bank and raising her total score to 13.
4. Red Devils – you get to go first.

## STATION 5: RACING

### Instructions

1. Go to <http://www.gamesmostwanted.com/racingcars1.htm>.
2. All-Blacks – you can select any car you'd like, as long as it's not red.
3. Red Devils – you can select any car you'd like, as long as it is red.
4. Press the start button. The winner is the car that finishes first (ignore the non-selected cars – they don't count in the standings).
5. This is a best of 13 event – run 13 races in total.

## STATION 6: TWO BITS

### Instructions

1. Each team simultaneously flips a coin.
2. If the coins do not match (one head and one tail), then the All-Blacks get 1 point.
3. If both coins are heads, the Red Devils get 2 points.
4. If both coins are tails, both teams lose 1 point.
5. First team to 19 wins.

## STATION 7: DICE WARS

### Instructions

1. All competitors simultaneously roll a six-sided die.
2. The Red Devils add their team dice to calculate their score; the All-Blacks multiply their team dice to calculate their score.
3. If the Red Devils have a higher score, they get 3 points; if the All-Blacks have a higher score, they get 1 point.
4. First team to get to 16 wins.

## STATION 8: PICK A CARD, ANY CARD

### Instructions

1. Red Devils, shuffle the cards provided thoroughly. Fan out the cards, keeping them face-down.
2. All-Blacks get to pick a card from the face down deck.
3. If the selected card is black, the All-Blacks get 2 points. If it is red, the Red Devils get 1 point.
4. First team to 21 wins.

## STATION 9: SPINNER

### Instructions

1. Red Devils, press the spinner displayed on the smartboard.
2. If the needle lands in the red quadrant, the Red Devils get 7 points.
3. If the needle lands in the purple quadrant, both teams lose 1 point.
4. If the needle lands in the green quadrant, the All-Blacks get 3 points.
5. If the needle lands in the orange quadrant, the All-Blacks get 5 points.
6. First team to 21 wins.

---

## SCORE KEEPING

---

### The Aces

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Deuces

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Treys

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Quads

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Fighting Majors

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Saturdays

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Lucky Sevens

Station	1	2	3	4	5	6	7	8	9
Winner									

### The Eight-Legged Freaks

Station	1	2	3	4	5	6	7	8	9
Winner									

### Niners

Station	1	2	3	4	5	6	7	8	9
Winner									