



Mathematics

# FAMILY DICE GAMES





# The humble dice

The humble 6 sided dice can be used in a variety of games to build confidence and fluency with numbers.

You might have grown up playing dice games with your family, Yahtzee was always a favourite of mine. I remember spending many afternoons playing with my grandparents, marveling at their speed in addition, how did she add that up so quickly!

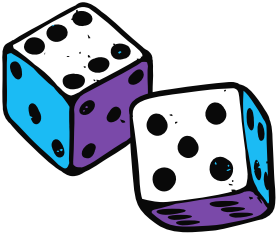
Getting to an answer is only one part of the mathematical thinking journey. How we get to the answer is just as interesting, and can differ for all of us. It's a great conversation starter with the young and old, 'How did you get that answer?' "what process did you use?, whether the answer be correct or incorrect, the process is intriguing.

As parents we often talk about getting our kids to spend less time on electronic devices and more time communicating, playing, being in the real world. With very little set up, dice games are a great go-to when you're short on ideas. Usually only requiring a few 6 sided dice, some paper and pens/pencils for recording - you can jump into a game at a moments notice.

Raid the board games, collate the dice in one central container and have your scrap paper and pencils nearby to leap into a game at a moments notice.

We hope these games add to your families collection of fun things to do together.





# Family Dice Games

## Beetle

Grab your lucky dice and brush up on your drawing skills! This creative and simple game requires players to draw beetle parts depending on the number they roll. The first player with a fully completed insect wins!

### What You'll Need:

- 2+ Players
- One Die
- Blank Sheet of Paper for Each Player
- Pencils/Pens
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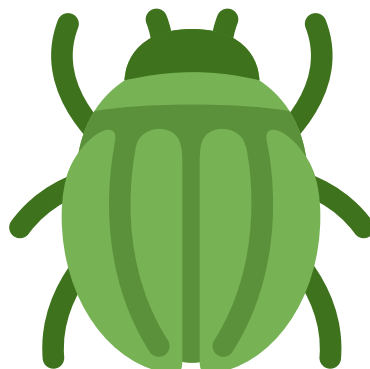
### How to Play

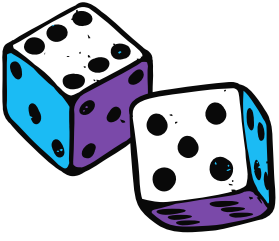
A random player begins the game by rolling the die. Using the below reference, the player will then draw the body part correlated to the number they rolled. The next player will then roll the die and draw their body part.

- 1 – Body
- 2 – Head
- 3 – A leg
- 4 – An eye
- 5 – An antenna
- 6 – The tail

You'll be sure to encounter a few challenges as you sketch your beetle. **A body must be drawn before any other parts.** A beetle without a body cannot have legs or a tail, after all!

Furthermore, the head must be drawn before the eye and antenna can be added. Rolling a 1 and 2 is essential to completing your drawing. If you roll a number associated with a body part that cannot be drawn, your turn is skipped and the next player rolls. The first player with a fully sketched beetle is the winner!





# Family Dice Games

## Sevens

The number 7 is widely considered a lucky number, but in this game, you want to avoid it at all costs! Will you take the risk to rake in more points?

### What You'll Need:

- 3+ Players
- 6 Dice

### How to Play

Agree upon how many rounds you'll play and who will begin the game. The first player will then roll all six dice and remove any combination of numbers that add up to seven. The goal is to score the highest possible total by adding the numbers shown on the remaining dice.

The first player will have the option to roll up to three times during their turn. Once they have removed any sets of dice that add up to seven (this can include one or more sets), those dice are set aside and not used again for their turn.

Add the numbers on the remaining dice to calculate the score. If the player is not happy with their score, they may roll again. However, any combination of dice that total seven must be removed. They may then choose to accept their score or take the risk of rolling again to increase points. Keep in mind that the players that follow may only take as many throws as the first. For example, if the first player only rolled twice, then all the other players may not roll more than two times.

The game ends once all the rounds have been played, and the player with the highest score will be the winner!



# Family Dice Games

## Zanzibar

Zanzibar is an easy dice game that boomed in popularity within French pubs. Today, it is played all over the world and suitable for any number of players. Be the first to rid yourself of all tokens and you win!

What You'll Need:

- 2+ Players
- Three Dice
- 20 Chips for Each Player (You may also use play money, chocolate coins, M&M's, or anything similar)
- One Scoresheet for Each Player

How to Play

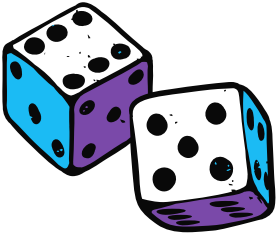
The game begins after each player grabs 20 chips for themselves. The goal is to get rid of all your chips at the expense of other players.

Once you're all set, the first player may roll the dice up to three times to earn as high a score as possible through specific combinations. Here is a look at the combinations you'll want to roll:

- 4,5,6 – (Also known as a Zanzibar)
- 1,1,1
- 2,2,2
- 3,3,3
- 4,4,4
- 5,5,5
- 6,6,6
- 1,2,3

If you don't roll these combinations, no worries. You can also earn points by adding the sum of the three dice together.

- 1 = 100 points
- 6 = 60 points
- 2 = 2 points
- 3 = 3 points
- 4 = 4 points
- 5 = 5 points



# Family Dice Games

## Zanzibar

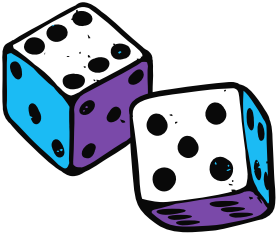
As an example, if you throw a 1,4,5, you'll receive 109 points. Should you roll a 3,2,2, you'll earn 7 points.

Once the first player's turn has ended and they've calculated their score, the dice move counterclockwise to the next player, who will attempt to roll a higher score within the same number or fewer rolls than the first player.

Once everyone has had their turn, the player with the lowest score must receive chips from everyone else. How many they gain will depend on the hand of the player with the highest score.

- 1 chip if the highest score is a points total
- 2 chips if the highest score is 1,2,3
- 3 chips if the highest score is three-of-a-kind
- 4 chips if the highest score is 4,5,6 (Zanzibar)

Whichever player won that round will begin the next. This will continue until one player has no chips remaining, which will deem them the winner.



# Family Dice Games

## Farkle

If you're a gamer that appreciates a little risk, Farkle may be a great choice for you! This challenging yet easy-to-learn dice game has many different variations, but these rules are the most commonly used.

### What You'll Need:

- 2+ Players
- 6 Dice
- Scoresheet
- Pens/Pencils

### How to Play

One player begins the game by rolling all six dice. The goal is to score the most points by rolling different dice combinations. Below is a scoring system that is typically used for this game.

5 = 50

1 = 100

3 of a kind = face value x 100 (3 Fives = 5 x 100)

4 of a kind = 1000

5 of a kind = 2000

6 of a kind = 3000

Straight (1-6) = 1500

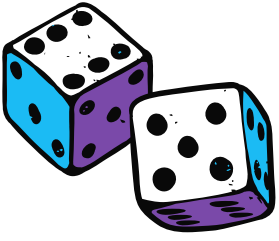
3 pairs = 1500

2 sets of 3 of a kind = 2500

If a combination is rolled, the player will keep the dice worth points and may roll the remaining dice to gamble for more points. If another combination is rolled, the player may add the points to the sum of the previous rolls. However, if a combination is not rolled, it is a Farkle and the player forfeits any points they have collected during that turn. The dice will then move clockwise to the next player. Don't forget to record any awarded points on your scoresheet!

Once a player reaches 10,000 points, the other players get one more chance to earn a higher score. Whoever has the most points over 10,000 at the end of the game wins!





# Family Dice Games

## Going to Town

Going to Town is another simple yet exciting dice game in which players roll to win the most number of rounds.

### What You'll Need:

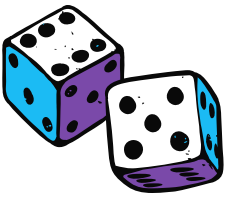
- 2+ Players
- Three Dice

### How to Play

The goal of Going to Town is to win rounds by rolling the highest total dice amount. To start, mutually agree on how many rounds you'd like to play and select a random player to toss all three dice. The highest number rolled will be kept.

The player will then roll the remaining two dice and again hold onto the highest number. Roll the final die and add that number to your overall score for that turn. These steps will be repeated by each player around the table. Once everyone has rolled, the player with the highest score wins the round. Continue this until the end of the final round and add up your points. The player with the most will walk away victorious!





# Family Dice Games

## Bunco

In this team-based dice game, players score points by rolling a specific number on the dice depending on which round they're on. The player that collects the most points and Buncos at the end of the game wins!

### What You'll Need:

- 4+ Players (Game best played with some multiple of four players).
- Three Dice
- One Score Sheet for Each Player
- Pencil
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### How to Play

Set up your tables to seat four players and decide which one will serve as the Head Table. The other tables will be numbered. Each table will divide into teams of two and sit across from each other. The object of the game is to win rounds by scoring more points than your opposing team.

Points are earned by rolling the same number as the round you are in. For example, if you're in Round 1 and roll a 1, you'll score a point. This will continue until the end of Round 6. More points can be awarded if you roll more than one number that corresponds to the round. If you roll two-of-a-kind, you earn two points. If a three-of-a-kind is rolled with the number of the round you are in, that's a Bunco and you'll be awarded a whopping 21 points. Should a three-of-a-kind be rolled with a number that does not correspond to the current round, you'll earn 5 points.

To begin the game, the first player at each table will attempt to roll as many 1's as they can to earn points for his/her team. Should at least one 1 be rolled, that player can roll again and try to roll more 1's to build on those points. This will continue until the player fails to roll another 1, at which point the dice will move to the next player to the left. That player will repeat this process until no 1's are rolled. Don't forget to document your points on the scoresheet! This will be helpful when adding up how many points you and your teammate collect.

Keep passing the dice around the table until a team at the Head Table scores at least 21 points, which signals the end of the round. Other tables are permitted to keep rolling until the Head Table has completed the round, even if it means your team scores more than 21 points. Once the Head Table signals that the round is over, active players at other tables must finish their turn until the desired number is not rolled. The team that collects the most points during that round will document a "W" for win on their scoresheet underneath Round 1. If the round ends with a tie, each player gets one more turn to roll. The team with the most points after the roll will be deemed the winner.



# Family Dice Games

## Bunco

At the end of each round, players must move tables and switch partners. The winners of each table will move on to the next while the other team remains at the table they are already seated at. These players will be required to change their team by moving to an adjacent seat as the new players fill in the other two seats. This ensures that each player has a new partner for the round.

Repeat the above process until the end of Round 6. Players will then compare their individual wins and Buncos. The player with the most of both wins the game!

