

# **Maths Activity Booklet**







#### 20 Games to Play with Dice

Many people only use dice when playing board games. However, there are many ways to have hours of fun playing games with a few dice and a piece of paper.

This resource provides you with 20 games that can be played with family and friends.

1	2	3	4	5
Knockout Players 2+	Beat That! Players 2+	<b>Sit-Ups</b> Players <b>2</b> +	<b>Stuck in the Mud</b> Players <b>2</b> +	<b>Round the Clock</b> Players <b>2</b> +
Difficulty <b>Easy</b>	Difficulty <b>Easy</b>	Difficulty <b>Easy</b>	Difficulty <b>Easy</b>	Difficulty <b>Easy</b>
Maths Skill Addition	Maths Skill <b>Number</b>	Maths Skill Addition	Maths Skill Addition	Maths Skill Addition
Dice Needed <b>2</b>	recognition and place value.	Dice Needed 2	Dice Needed 5	Dice Needed <b>2</b>
<b>Aim of the Game:</b> Avoid throwing certain	Dice Needed 2	<b>Aim of the Game:</b> Score the lowest possible	<b>Aim of the Game:</b> Achieve the highest score	<b>Aim of the Game:</b> The first player to roll all
scores and being knocked out of the game.	<b>Aim of the Game:</b> Aim to produce the largest number possible when rolling two dice.	score to avoid the highest number of sit-ups in each round.	when rolling 5 dice. However, if a 2 or a 5 are rolled, those dice are 'Stuck in the Mud'.	numbers from 1-12 on the dice wins.







6	7	8	9	10
<b>Even the Scores</b>	Higher or Lower	The Roll Race	Dice Battle	Tower Power
Players <b>2+</b>	Players <b>2+</b>	Players <b>2+</b>	Players <b>2+</b>	Players <b>2+</b>
Difficulty <b>Easy</b>	Difficulty <b>Easy</b>	Difficulty <b>Easy</b>	Difficulty <b>Easy</b>	Difficulty <b>Easy</b>
Maths Skill Addition	Maths Skill <b>Place Value</b>	Maths Skill Addition	Maths Skill Addition	Maths Skill Addition
Dice Needed <b>2</b>	Dice Needed <b>2</b>	and Subtraction	Dice Needed <b>20+</b>	Dice Needed <b>2</b>
<b>Aim of the Game:</b> The first player to roll all even numbers from 2-12 on the dice wins.	<b>Aim of the Game:</b> Successfully roll the dice 10 consecutive times, correctly guessing whether the next roll will be higher or lower than the last.	Dice Needed <b>2</b> <b>Aim of the Game:</b> There are 12 sections on a picture to colour. Take turns rolling the dice. The first player to completely colour their picture wins.	<b>Aim of the Game:</b> This game requires a large number of dice. Whoever rolls the highest amount gains dice in this battle of chance.	<b>Aim of the Game:</b> Add up the dice and stack cubes to make a tower. The winner builds the tallest tower.







11	12	13	14	15
21	Calculations	Make 20	Dotty Six	Tug of War
Players <b>2+</b>	Players <b>2+</b>	Players <b>2+</b>	Players <b>2+</b>	Players <b>2+</b>
Difficulty <b>Medium</b>	Difficulty <b>Medium</b>	Difficulty Medium	Difficulty Medium	Difficulty Medium
Maths Skill Addition	Maths Skill <b>Four</b>	Maths Skill <b>Number</b>	Maths Skill Addition &	Maths Skill Addition &
Dice Needed Up to 5	Operations	Recognition	Subtraction	Subtraction
Aim of the Game:	Dice Needed 3	Dice Needed <b>2</b>	Dice Needed 2	Dice Needed <b>2</b>
Roll up to five dice with the aim of scoring as close to 21 as possible.	<b>Aim of the Game:</b> Roll three dice. How many calculations can you create using the amounts rolled? More calculations mean more points.	<b>Aim of the Game:</b> Roll the dice. Add or subtract the amounts to help make 20. The first to make 20 wins.	<b>Aim of the Game:</b> Using a 3 by 3 grid, the first to complete a line of three sixes wins.	<b>Aim of the Game:</b> Start in the middle. One adds. One subtracts. The first player to reach the beginning or end of the number line wins 'Tug of War'.





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16	17	18	19	20	
Table for 2	Honeycomb	Drop Zone	Make 50	Four-In-A-Row	
Players <b>2+</b>	Hexagons	Players <b>2+</b>	Players <b>2+</b>	Game	
Difficulty <b>Medium</b>	Players <b>2+</b>	Difficulty <b>Hard</b>	Difficulty <b>Hard</b>	Players <b>2+</b>	
Maths Skill Addition,	Difficulty <b>Hard</b>	Maths Skill	Maths Skill Addition &	Difficulty <b>Hard</b>	
Subtraction and	Maths Skill Addition	Multiplication	Subtraction	Maths Skill <b>Four</b>	
Multiplication	and Subtraction	Dice Needed <b>1</b>	Dice Needed <b>3</b>	Operations	
Dice Needed <b>2</b>	Dice Needed <b>2</b>	Aim of the Game:	Aim of the Game:	Dice Needed 3	
<b>Aim of the Game:</b> Every player starts on the number 2. The aim is to roll every number in the two times table before your partner.	Aim of the Game: Roll both dice. Add or subtract the numbers rolled to cover a number on the Honeycomb Hexagons board. First to reach the other end of the board wins.	Roll the dice onto the Drop Zone board. Multiply the numbers and keep a running total. The highest total wins.	Roll the dice. Add or subtract the amounts to help make 50. The first to make 50 wins.	<b>Aim of the Game:</b> Roll three dice. Add, subtract multiply or divide the numbers rolled to connect four on the game board.	











#### Knockout

Before the game starts, decide on a score needed to win.

- 1. Each player chooses a 'Knockout' number. (e.g. 6, 7, 8 or 9).
- 2. Players take turns throwing both dice.
- 3. Add the numbers on both dice to give a total score.
- 4. If a player hits the 'Knockout' number, they lose the game.





- 1. Each Player takes turns rolling two dice.
- 2. When a player has rolled the dice, they should place the dice in the order that will produce the largest number possible. For example, if a player rolled a 2 and a 5, they may choose 52 as their number to beat as that is a larger number than 25.
- 3. After each throw, player one challenges player two to 'Beat That'.
- 4. Play this game in rounds, assigning a winner of each round.





#### Sit-Ups

- 1. Each Player takes turns rolling two dice.
- 2. Add up the total amounts shown from both dice.
- 3. Whoever scored the highest amount performs the number of sit-ups they rolled.



# Stuck in the Mud

In this game, you can only score on a roll which does not include the numbers 2 and 5.

- 1. Choose a player to start and agree on a number of rounds you are going to play (5 works well).
- 2. Roll five dice. If you rolled a 2 or a 5, those dice are now 'Stuck in the Mud'.
- 3. When you do not roll a 2 or a 5, add up the total of the dice and remember it.
- 4. Roll the remaining dice, adding the totals until all your dice are 'Stuck in the Mud'.
- 5. Record your total and allow your partner to play.
- 6. The highest total at the end of the game wins the round.





### **Round the Clock**

- 1. Start by taking it in turns to roll two dice.
- 2. Use addition or subtraction in the quest to fill all hours on the clockface. For example, if a 6 and a 4 are rolled, 10 or 2 could be covered on the clock face.
- 3. The first person to cover the hours 1-12 wins.







#### **Even the Scores**



- 1. Take it in turns to roll one or two dice, depending on the number you are aiming to get on your board.
- 2. If you choose to roll two dice, add up the total amounts shown on both dice.
- 3. If you roll an even number, mark off the number you have rolled and roll again.
- 4. If you roll an odd number, hand the dice over to your partner for them to take their turn.
- 5. Repeat the game until one player has covered all of the even numbers on the board.

1	2	3	1	2	3
4	5	6	4	5	6
7	8	9	7	8	9
10	11	12	10	11	12





# Higher or Lower



- 1. Take it in turns to roll two dice, adding up the total.
- 2. Guess whether the next roll will make a number that is higher or lower than the last.
- 3. Aim to consecutively move ten times up the board from start to finish.
- 4. If you guess incorrectly, it's your partner's turn to play.

1	2	3	4	5	6	7	8	9	10
START									FINISH







#### 20 Games to play with Dice

## The Roll Race

1. Take it in turns to roll two dice.



- 2. Use addition and subtraction skills to colour in each section on the racetrack. For example, if a 6 and a 4 are rolled, either 10 (6 + 4) or 2 (6 4) could be coloured in on the racetrack.
- 3. The first player to travel round the track is the champion.
- 4. You must travel clockwise around the track.









### **Dice Battle**

- 1. Grab as many dice as you have from every board game around the house.
- 2. Each player starts by throwing two dice each. The rest of the dice are placed in the middle.
- 3. Once each player has rolled, the highest score gains a dice from the middle.
- 4. Repeat the same until all dice are removed from the middle.
- 5. Whoever gains the most dice wins.



#### **Tower Power**

- 1. Each player rolls a dice twice, adding together the numbers they get in each roll.
- 2. Players build a tower using the same amount of blocks as their total.
- 3. Repeat, in turns, until your tower is about to collapse.
- 4. The winner is the player who has the tallest tower.
- 5. If your tower collapses, you lose this round.







#### 21

For this game, you will need access to 5 dice but you may not need to use them all in each turn.

- 1. Roll the first three dice and add up your score so far.
- 2. Make a decision: Stick or twist? If you stick, your partner has to beat your score.
- 3. If you twist, roll another die and add your total.
- 4. Decide again whether to stick or twist, before your partner tries to beat your score.
- 5. At the end of each turn, the player whose score is closest to 21 wins.



#### Calculations

- 1. Roll a die three times.
- 2. How many calculations can you create with the numbers you rolled?
- 3. The winner is the player who accurately creates the most calculations.





#### 20 Games to play with Dice

#### Make 20

- 1. Take turns to roll two dice.
- 2. Add or subtract the numbers rolled to give a total for each turn, with the aim of getting to a total score of 20.
- 3. Continue rolling, adding and subtracting until your total score is as close to 20 as possible.
- 4. When scoring, you can be one point under but not one point over 20.
- 5. At the end of each round, the player closest to 20 is the winner and gains a point.



# Dotty Six



- 1. Draw a 3 by 3 grid and choose one coloured crayon for each player; where possible, each player should have a different colour.
- 2. Take turns rolling a dice, drawing the number of dots you rolled into one of the spaces on the grid.
- 3. The aim of this game is to have six dots in a square and three sixes vertically, horizontally or diagonally.

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# Tug of War

- 1. Draw a number line like the example given and circle the number 14.
- Player 1 moves their counter to the right of number 14 and Player
  2 moves their counter to the left of number 14.
- 3. Take it in turns to roll two dice, adding the two numbers rolled.
- 4. Move your counter in your direction.
- 5. If their counter reaches 27 first Player 1 wins the game. If their counter reaches 1 first then Player 2 wins the game.



#### 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27





# Table for 2

- 1. Every player starts on the number two.
- 2. Take turns rolling two dice.
- 3. Use addition and subtraction skills to make numbers in the two times table using the numbers you have rolled on the dice.
- 4. The winning player is the first to tick off every number in the two times table.







# Honeycomb Hexagons

- 1. Players take it in turns to roll two dice.
- 2. On their first turn, players must make a number on the first column of the Honeycomb Hexagons board (1, 6, 0 or 5) by adding or subtracting the numbers rolled.
- On their next go, they must make a number on the next column of the Honeycomb Hexagons board (9, 4, 8, 3 or 7) and so on.
- 4. The first player to successfully move from one side of the board to the other wins.





#### **Drop Zone**

- 1. Take turns rolling a die onto the Drop Zone board.
- 2. When the die settles, players must multiply the number shown on the die by the number it landed on the board.
- 3. The larger the total, the more points you gain.
- 4. Players add up their total scores after five turns.
- 5. The player with the highest score wins.





### Make 50

- 1. Take turns to roll three dice.
- 2. Add or subtract the numbers rolled to give a total for each turn, with the aim of getting to a total score of 50.
- 3. Continue rolling, adding and subtracting until your total score is as close to 50 as possible. Each player can roll up to ten times.
- 4. When scoring, you can be under but not one point over 50.
- 5. At the end of each round, the player closest to 50 is the winner and gains a point.





#### Four-In-A-Row Game

- 1. Take turns when rolling three dice.
- 2. Add, subtract, multiply or divide the three amounts to match a number on the game board.
- 3. The first player to connect four numbers on the game board wins.

1	8	3	0	7	4
2	6	2	9	1	11
12	1	5	0	4	5
2	7	8	2	6	3
10	0	4	3	1	7
3	9	1	6	2	5

