Year 1 Maths Games

SPACE 10

Here's a simple, yet tightly focused **maths game** that enables children to practice working with number bonds to 10. The board (and associated digit cards) has a 'space' theme to mark 50 years of manned space exploration.

The pdf file (below) includes the Rocket Game Board and a set of 0-10 number cards.

The game works like this. Two children have the Rocket Game Board between them and a counter each.

The 10 number cards are shuffled and placed face-down near the board. (0-10 dice)

Now the first player turns over a number card, he or she then looks for the first complementary number on the track. For example, if they turn over a 3 they move to the closest 7 (3+7=10) on the track; if they turn over a 10 they move to the first zero (10+0=10).

Now, the next player chooses his card, and the game continues until one player reaches Earth at the top of the board.

The game can be adapted in a number of ways. Dice could be used instead of the number cards, or some number cards could be omitted. Also, in this first version of the game the counters are always moved forward. For most young children this keeps the game interesting and motivation is high. However, some children may benefit from adapting the rule: the counter moves to the nearest correct number – either forward or backward.

Turning over an 8 means this player must move to a 2… the closest 2 is towards the start space and away from the finish line – in effect this player is moving away from their goal. This will make the game last longer, and you may wish to use a sand timer – when the sand runs out the player closest to Earth is the winner!

SPACE 10

5 7 2 4 6 9

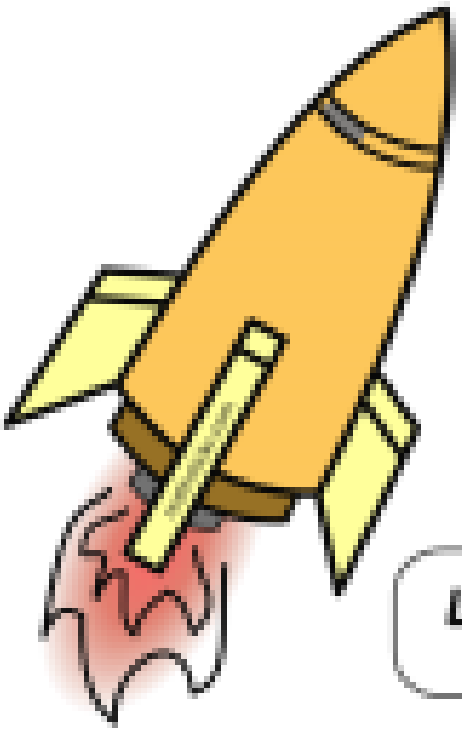
4 8 1 9 3 5

0 9 6 10 7 4 3

6 5 8 10 0 2 6 1

4 7 9 1 3 0 6 1

4 7 10 8 5 2



SHUT THE BOX

You need the game or cards numbered 1-12.

Lay the cards out face up.

A modern take on an old English pub game. Just throw the 2 dice, add up the roll, and flick down the corresponding number tiles. When no more moves can be made, add up the remaining open tiles and the player with the lowest score wins. This addictive game can be played individually or in rounds meaning there's no limit to how many people take part. Shut The Box is great group/classroom game and the perfect tool to help teach number bonds and simple addition to children.

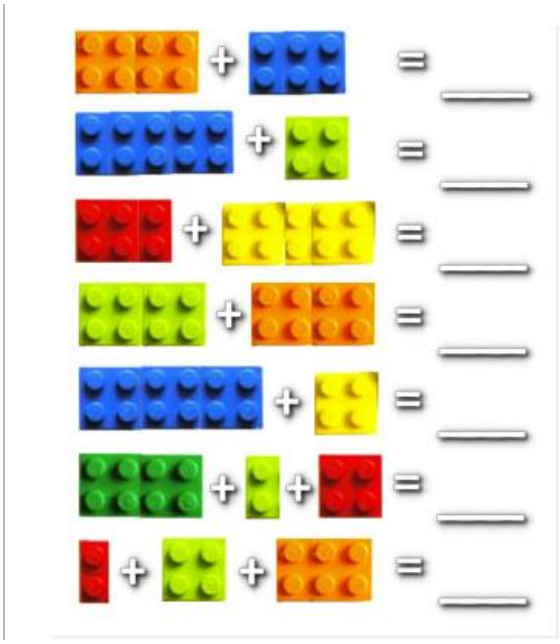
NUMBER BONDS

This game is ideal for mental / oral sessions practising number bonds.

Choose which number bond you want your child to practise. For example bonds to 10.

Start by saying a number e.g. 2 throw a ball to a child they catch and respond with the number bond 8- then throw it back to you. Repeat with other numbers.

LEGO MATHS

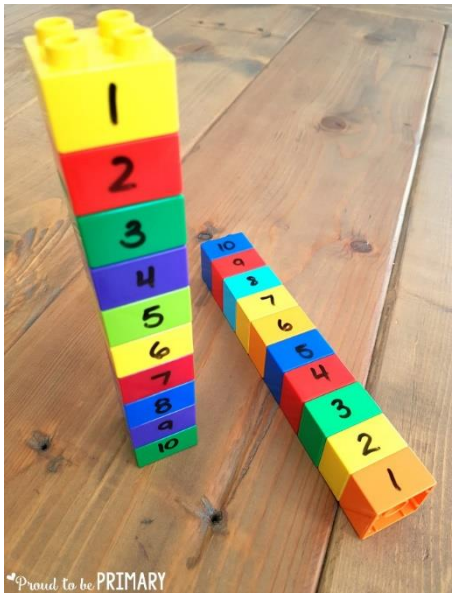


Using Lego pieces make totals. Such as make 10 or make 20.

How many different ways can you make a target number.

Write numbers on Lego and order the numbers.

Make sticks of 10 and build numbers using tens and units.



Connect Four!

Subtraction

8	5	1	7	2	4	6
4	3	5	0	4	1	7
5	4	2	6	3	5	8
1	6	5	3	7	5	0
3	2	7	1	0	4	5
4	1	7	3	0	6	9

How To Play:

1. Roll two dice (1-6 & 5-10)
2. Subtract the numbers
3. Cover the difference with your marker.
4. First player to get 4 in a row wins!

Connect Four!

Addition

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

How To Play:

1. Roll two dice
2. Add the numbers
3. Cover the sum with your marker.
4. First player to get 4 in a row wins!

COUNTING ON CARD GAME.

What do you need to play the game?

This is a card game for 2 players.

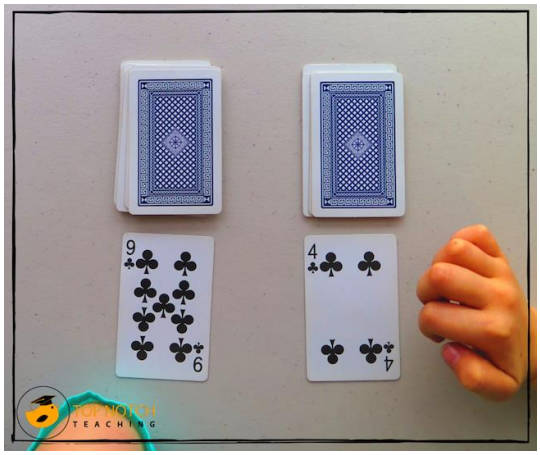
- Deck of cards with the picture cards removed (Jack, Queen, King, Joker).
- The ace can be used as a 1 in this game.

Instructions

1. Separate the cards in two piles, one with the cards: ace, 2, 3 and 4 and the other pile with the cards 5 – 10.

2. Shuffle each pile so they're in a random order and place face down on the playing surface.

3. Players take turns turning over the top two cards. They add the two numbers using the counting on strategy: count on from the larger number, and count on the smaller number. For example, if the two cards turned over were 9 and 4. They would start with 9, count on 4: 10, 11, 12, 13.



4. If players have the correct answer, they get to keep both cards.

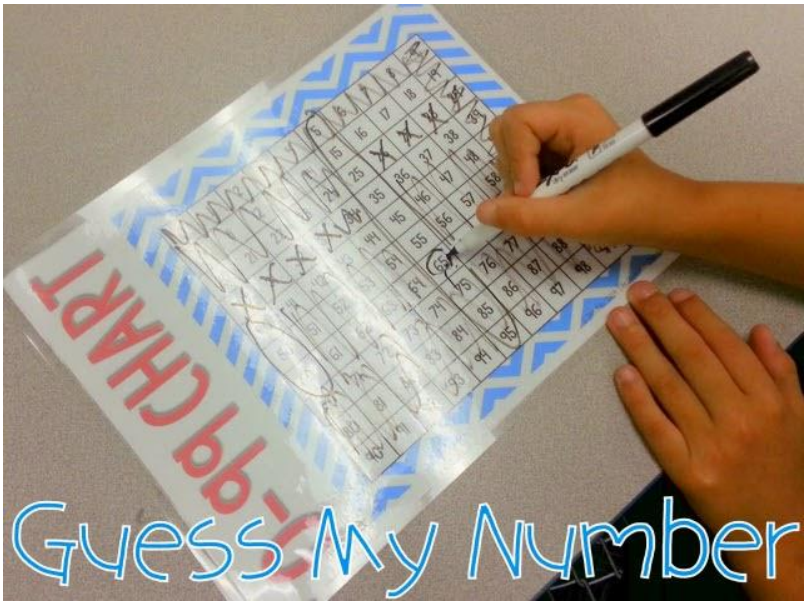
5. If the answer is incorrect the other player can have a go at answering the question to keep both the cards.

6. Continue play until one of the piles run out of cards.

7. The winner is the player with the most cards at the end of the game.

You could change this game easily to subtraction where the player counts back.

GUESS MY NUMBER



You need a 100 square or number line (for example to 20) and a dry erase marker. This game can be played whole group, in pairs or in small groups of 3-4.

To begin, one student chooses a number. The other players try to guess the number by asking a series of questions. The student crosses off numbers it can't be and circles numbers it could. The person who guesses the right number, wins and gets to choose the next number.

- Possible questions to encourage:
- Is it bigger than x
- Is it smaller than x?
- Is it in the teens?
- Does it have more than 3 tens?
- Are the digits the same?
- It the tens digit larger than the ones digit?
- It the number a multiple of 2,(or 5 or 10 etc)

MAKE TEN

is an easy to play and fun math card game which teaches ways to make 10 with addition and subtraction. All you need is a deck of cards, which I bet you already have.

How to play Make Ten:

1. Remove the face cards from a deck of playing cards and place the deck, face down on the table.

2. Each player chooses 5 cards and places the cards in front of him.

3. The first player uses the 5 cards to create as many equations as he can in which the sum equals ten. For example, If I have 9, 9, 3, 2, 4, I could make the following equations: 9+4-3=10 and 9+3-2=10

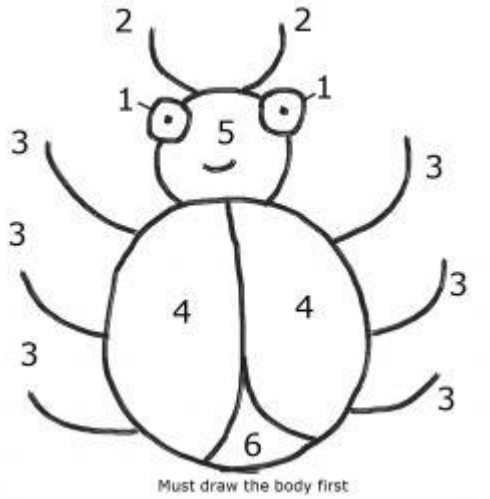
4. After making as many equations as possible, player sets aside the used cards and play passes to the next player.

5. Play continues with players refilling their hands to 5 cards at the start of each turn.

6. Whoever uses the most cards by the end of the deck wins.

BEETLE

For 2 or more players aged 4+



The object: Be the first to complete your beetle!

Materials: Pencil, paper, 1 x standard dice (more dice can be added to make this game move a little quicker)

How to Play: Beetle is a childhood classic. Each player rolls a die and draws a body part of a bug, depending on the die roll.

Certain parts must be drawn before others may be drawn, you always need a roll of a 6 to draw the body before you can attach anything else!

The first to complete their bug wins. A classic for young children to help them with number recognition.

Roll a die and draw the body parts!

6 - Body (you need a body first to add any parts to!)

5 - Head (you need a head first to add head parts)

4 - Wings

3 - Leg

2 - Antenna

1 - Eye

DOMINO DIFFERENCES

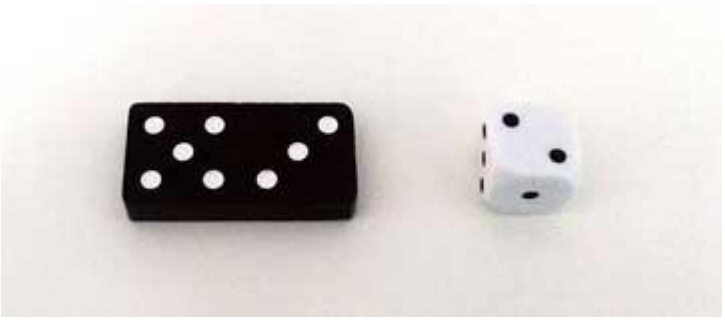
This is a fun maths activity that gives young children plenty of opportunities to practice '**finding the difference between**' small numbers.

You just need a box of dominoes and a dice.

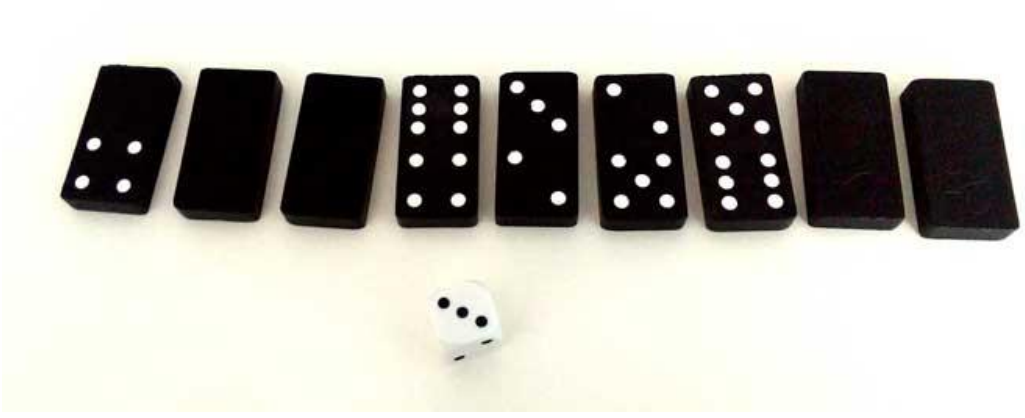
Here's what happens:
Two children work together to search through the dominoes. You ask them to focus on the **difference between** each side of the dominoes so a 4-1 domino would have a difference of 3 and a 6-4 domino would have a difference of 2. Doubles will have a difference of zero. How many doubles can they find?

Once the children have found all of the doubles talk about the numbers and then put those dominoes to one side.

Now, with just the remaining dominoes, ask the children to mix them face-down, and then to select nine dominoes each. They place these in a line in front of them.
Now the game begins.



The children take it in turns to roll the dice. They then have to look at their range of dominoes to find one where the **difference** matches the number on the dice.
Here the 5:3 domino matches the dice number since it has a difference of 2.
If the player finds a domino that matches they turn it face-down.
The dice is passed to the other player who does the same.
Play continues in this way, with each child taking it in turns to roll the dice and locate a domino with a difference that matches. If a child does not have a suitable domino, they miss that go and pass the dice to the other player.
Here's a game after a few turns:
The player here has another move available. He's rolled a 3, and there's a 5:2 domino in his line.



Play continues until one player manages to turn over all, or most of their dominoes in a set time.
This game enables the children to be involved in some meaningful '**maths talk**' about subtraction and differences. And the nature of the domino dots means that the children's calculations are supported.

20 – 20 CARD GAME.

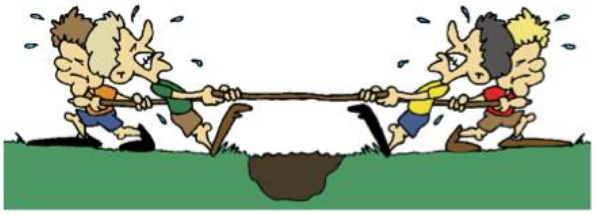
This is a simple, but very effective (and engaging) card game. You need all the cards 1-10 from a deck of cards The game looks a little like Scrabble, but plays out more like a word-search.

The children take turns to lay out the 1-10 cards in intersecting lines. Whenever a player manages to create a line of cards that sums to 20 they mark both ends of that line with a picture card which indicates 20 has been made. The winner is the first person to create three such ’20’ lines.

The great thing here is that since this is a real life (cards on table) game, for 2 to 4 players, the children playing can help each other. This makes it perfect for mixed-ability groups. And, as you might expect, if you encourage clear conversation between the children the maths bubbles to the surface and **everyone** learns a great deal.

YEAR 2 Maths Games

TUG OF WAR



Here is a game for **two** players.
You will need a counter (or something similar), paper and two 1-6 dice.

How to play:
Draw a number line on paper like this and place the counter on the number 14 (the red circle in the picture represents the counter):

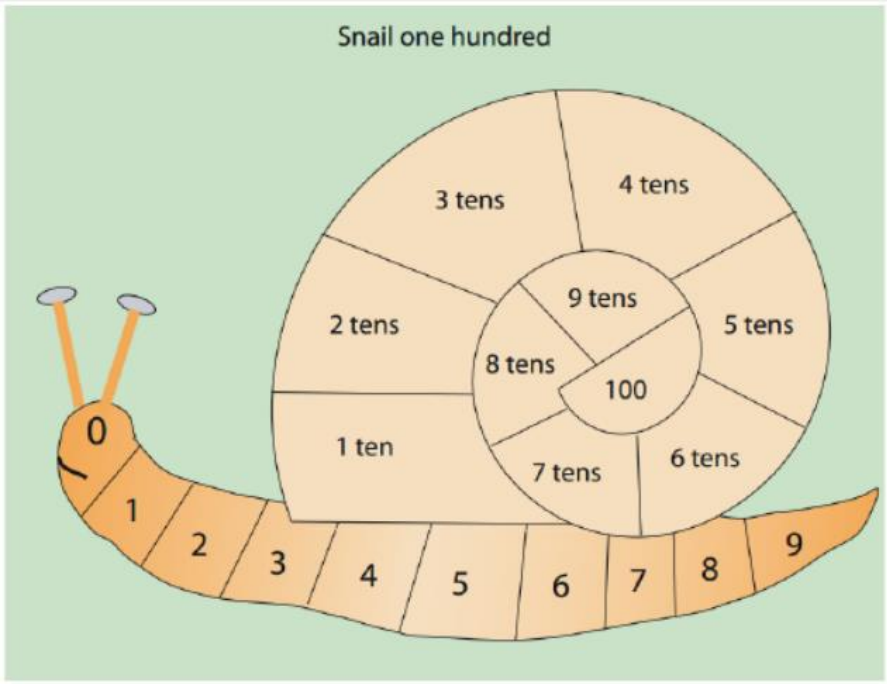
One player is called 'Plus' and the other is called 'Minus'. Decide who is who.
Plus moves the counter from left to right and Minus moves the counter from right to left.
Take it in turns to throw the two dice and add up the two numbers.
Move the counter that number of places in your direction.
If the counter reaches 1, Minus has won and so, of course if the counter reaches 27, Plus has won.

You might think about whether you have to land exactly at 1 or 27 or if you're allowed to end up beyond those points. What difference will it make if you are allowed to go beyond rather than landing exactly on the end numbers?

Once you have got used to the game, you might like to make some changes. You can decide. Perhaps you might have one counter each and see who gets to their end first; perhaps you might find the difference between the two numbers on the dice; perhaps you might use three dice; perhaps you might use one dice and a shorter line...

When you've changed the rules you can talk about whether or not your change makes the game better to play.

SNAIL ONE HUNDRED



This game is about counting up to 100.

You will need the board which you can download here, https://nrich.maths.org/8303 ; an ordinary dice and a pair of matching counters for each player.

How to play the game:
To start put both your counters on "0" - which is the snail's eye!

The first player throws the dice and moves one of their counters that number along the snail's body. Take turns at throwing the dice.

After you get to "9" the first counter goes back to "0" and the second counter goes onto "1 ten".

Go on moving the first counter along the snail's body and moving the second counter to the next "ten" every time you get to the end and go from 9 to 0.

The winner is the first to reach "100".

DOUBLE OR HALVE?

Age 5 to 7
This is a game for two players.

You will need a dice.

How to play:

- Decide on a target number. This is the total that both players are trying to make.
- Player 1 throws the dice. S/he can choose whether to double the number shown or halve the number shown.
- Player 2 throws the dice. In the same way, s/he can choose whether to double the number shown or halve the number shown. Player 2 adds his/her number onto Player 1's number to make a running total.
- Play continues like this with each player rolling the dice, halving or doubling the number and adding the result onto the running total.
- The winner is the player who reaches the agreed target exactly.
-

Here are some questions to think about:

Must each player always take a turn?
Does it matter if you go first or second?
Are there any particularly good numbers to choose as your target?

PASS THE PEAS, PLEASE

Age 5 to 7

This is a game for two or more players.

5	8	0	2
4	6	1	7
3	7	8	4
9	1	5	2

You will need:

- A plastic cup
- Some dried peas or counters (two for each player)
- A game board
- Paper and a pencil each for calculating and recording scores

To play:
Each player needs a copy of the game board below (you can download one here):
https://nrich.maths.org/1247

All players begin by writing 50 on their score sheets.
The first player puts two dried peas into a plastic cup.
They toss the peas onto the game board, and add the two numbers that the peas land on.
They then take this sum away from 50 and write down the answer on their score sheet.
The next player takes a turn.
After the first turn, the players start with the new number written on their score sheet and take the sum of the numbers away from that, rather than from 50.

To win:
The first player to reach zero wins.

What if...?
Once you've played a few times, try changing the game!
Can you change the number of peas?
Can you change the starting number?
What could you do with the two numbers instead of adding them?
How could you change the board?

What happens when you change the rules?

PATIENCE:

objective- number bonds to 10 or higher. Lower times tables.

Remove all picture cards and 10's, Lay out 8 cards in a grid (4x2).

Version 1: Shuffle the remaining cards and deal to the players. Turn over one at a time. If the card can be matched with one on the grid that adds to the target number, then cover that card. If it cannot be matched then the card is placed in the players discard pile. Players take turns until all the cards on the grid are covered. The winner is the player with the least cards in his or her discard pile.

Version 2: Replace the 10's. Deal 7 cards to each player and place the remaining in the middle. Set a target number of say 20. Players can use any number of cards in their hand with one in the grid to make the target (if able - they could use any operation eg 2 on grid x 8 + 4 = 20). They then 'win' their cards and the grid card. They then replace the cards in their hand from the main pile. Play continues until all grid cards are removed. The winner is the player with the most cards in his or her pile

NIM-7 FOR TWO

Age 5 to 14

Here’s a game to play with an adult! This is a basic form of the ancient game of Nim.

How do you play?
You'll need an adult to play with.
You will also need seven objects, such as counters or blocks.

Place the 7 counters in a pile and starting with the adult, take turns to take away either one or two counters.
The person who takes the last counter wins.
Swap who goes first, and keep playing until you work out a winning strategy.

Does it matter who has the first turn?
What happens when there are three counters left?
How can you win at this game?
What happens when you start the game with more counters?

There are more Nim-like games here.

Notes for adults

This game offers a motivating context in which children can improve their logical thinking skills. It is a low threshold high ceiling game.

Easier version: record a game and look back together at key moments.
Harder version: try starting the game with different numbers of counters.

Repeat the game, aiming to find a winning strategy, then talk together about how it was found.

DON’T ROLL A 6!

In its most simple form, you roll one die again and again, adding up the total. When you roll a 6, you are bust and you have to start again from 0! How high can you get before you go bust?

This game is BRILLIANT for teaching the reason we use tallies, as children can tally their score as they go and then count up in fives to find their total when they go bust.

How I play the game: Children play in pairs. They take turns rolling the die while the other child in the pair tallies up the score on a whiteboard. Every time a 6 is rolled, the children work out their total score and store it on their whiteboard. After 1-2 minutes of play, I’ll stop the class and we’ll see what kind of high score people managed.

Children can also choose to play this game competitively, where they take turns rolling the die and they add the total to their own score. After 1-2 minutes, the person with the highest total in the pair wins. This is fun as even if you are in the lead at one point of the game, all it takes is rolling a 6 at the last minute to wipe you out!

QUICKFIRE DICE!

Super easy game to play, though be prepared for your classroom to get VERY loud!

Children play competitively in pairs. They take turns to roll one die. They have to look at the number on the die and work out and say the number bond to 10. So if you roll a 1, the first person to shout ‘9!’ would win a point!

Play for 1-2 minutes. If partners say the number at the exact same time then they both get a point.
Best played with children with similar Maths levels, so when the children come to me on the carpet fo find a partner, I’ll usually pair them off with someone I know will make for a close game.

This is a very versatile game, as you can move onto the children saying the number bond to 20. You could also have them say one more or one less than what the die shows.

NEAREST TO 99!

The goal is to get the score closest to 99 *without* going over and going 'bust'.

Children HAVE to take six rolls of a dice. On each roll, they can choose whether they want the number rolled to be counted as a tens number or a ones number before being added to their total. So if I rolled a 6 I could choose to have it count as sixty, or six.
My children love this game and it's great for teaching them estimation and getting them thinking about what they might roll next and trying to come up with a strategy. It's great fun when you're playing and you're on 94 BUT you still have 2 more rolls to have to take! Can you keep your score under 99 or will you go bust???

SPECIAL RULE: Once per game, a child is allowed to re-roll one die. This adds a bit of tension when you get near the end of the game as if you are on 97 you might roll a 3 and go bust, so you re-roll and hope for a 1 or 2!

NOTE: If by some chance the game ends and both children have landed on the exact same number or gone bust at the same time, have them roll a die to decide the game. Highest score takes the win!

EXTENSION: Have the children start at 99 and they have to subtract the numbers they roll. If they go below 0 they are bust!

SHAPE COVER UP

The activity uses:

- The downloadable Shape Cover Up board;
- A set of coloured counters for each player;
- A dice.

Players take turns throwing the dice, and at each throw they put a counter on a shape whose number of sides matches the number on the dice. They should name the shape. The winner is the first player to get three of their counters in a straight line.

Children can play for fun, or older children may start to develop strategies to ‘hold’ their opponent back.

The 2D shapes on the board have been chosen (and drawn) specifically to **aid learning and encourage mathematical talk**.

1 Circle, oval

2 semi-circle

3 triangle

4 square, rectangle, rhombus, kite

5 pentagon

6, hexagon

8 octagon

Shape Cover Up