

DICE GAMES FOR KS1

This document contains some fun, interactive dice games to help your child with Maths. We hope you enjoy them!

A Tower

Use Lego or any other building kits you have. Each player has 2 dice. S/he rolls the 2 dice and adds the spots together. If the addition is correct, the player takes that number of building bricks and starts building a tower. The winner is the person with the highest or most creative tower.

Going to Boston

Skills Learned

Less than and greater than
Addition
Multiplication

Materials Needed:

3 dice
Paper and pen for scoring

How to Play Going to Boston

Each player rolls a dice. The player with the highest number goes first.

Each player in turn rolls all three of the dice. After the first throw, remove the dice with the highest number and put it aside. Roll the two remaining dice and again put the highest number aside. Roll the last die and add up the numbers on all three dice to get the player's score for that round. Record the score on a pad of paper.

Continue taking turns moving clockwise around the table until all players have had a turn. The highest score for the round wins.

Play a number of rounds and either add up a combined score at the end or tally winning rounds to come up with a game champion.

Variations of Going to Boston

Play with two dice for younger children to learn addition skills.

Keep the lowest numbered die rather than highest for a slightly easier game that teaches addition skills.

Increase the number of dice in the game to 4+ to learn more complicated addition skills.

Learn multiplication by taking the sum of the first two dice and multiplying it by the third

Battle Dice

Based on a similar card game by the same name, this is a fun and easy dice game that can be modified to teach addition, subtraction and multiplication skills.

Skills Learned

Less than and greater than

Addition

Subtraction

Multiplication

Place value

Materials Required

2 dice for each player

Counters (beads, sticks, rocks, pennies, etc.) and/or paper and pen for scoring

How to Play Battle Dice

Have each player roll one die. The player with the highest number goes first.

Each player rolls their two dice. The numbers on both dice are added together to come up with an individual player's score. The player with the highest scoring combination wins the round.

Winning rounds can be noted on a pad of paper with a tally mark under the winning player's name, or with counters such as beads, rocks, or pennies.

Play a number of rounds and have players add up their counter or tally marks at the end to come up with a game champion.

Variations of the Game Battle Dice

Play with one die for younger children to practice basic less than/greater than sequencing.

Learn subtraction skills by having players subtract the lower die from the higher die to come up with a number for each round.

Increase the number of dice in the game to 3+ to teach more complicated addition skills.

Practice place value skills by having players create a double-digit number from the rolled dice.

For example, rolling a two and a five becomes either 25 or 52.

Learn multiplication skills by multiplying the numbers on the two dice to determine the winning score.

Dotty Six

This is a game which comes from the excellent website called nrich. There is some information below which summarises some of the important aspects of teaching Maths using practical resources. It provides some pointers of approaches you could take when playing Maths games with your child.

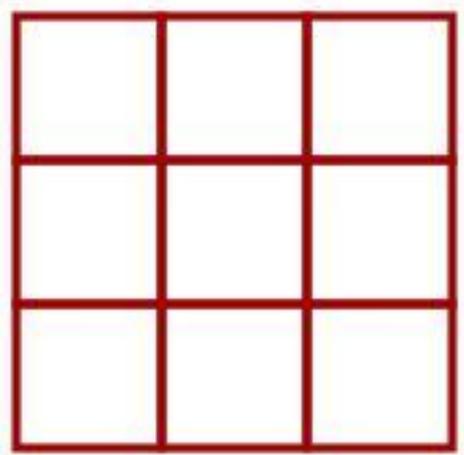
Dotty Six



Here's a game to play with a friend, a 3 by 3 grid and a six-sided dice.

Take turns to throw a dice, then draw that many dots in one of the boxes on the grid. You can't split them up and a box can't contain more than six dots.

The person who completes a line of three sixes wins!



nrich.maths.org

Useful open questions are:

- How many more dots do you need to fill that box?
 - I think you need five more dots to fill that box – am I right?
 - How many boxes have you filled so far?
 - If you threw a three, which box would you put the dots in?
 - I've thrown this where could that go?
 - I'm wondering what to do with this score. Can you help me?
 - If I throw a six, how many spaces are left for me to put it in?
- Allow enough wait time for the children to respond to your question.

Listening - Listening carefully to what the children actually say is sometimes harder than we realise. We may be expecting a fixed answer, their explanation may be part of a sentence or rather jumbled or rambling. Try not to finish their sentence for them – try just repeating what they have said and see if that helps them to finish it. Try checking whether you have heard what they said correctly – I think what you said was....am I right?

Responding - Often it is helpful to respond with another question, phrase or statement that helps explore the child's thinking. This will help you probe for deeper understanding and evidence of mathematical thinking and reasoning.

Starter Question	Follow-up Question
How many more do you need to fill that rectangle?	Are you sure? Convince me. Show me how you know that.
If you threw a three which rectangle could you put that in?	I am curious to know why you chose that one. I would choose this one....are we both right?
I've thrown a six, what can I do?	What could happen if I threw another six? How many sixes can I throw and still fit them on the board?

Tug of War

A game for 2 players, with dice and a paper numberline.

One of you is Plus and goes from left to right. The other is Minus and goes from right to left. Start at number 14 on a numberline which goes from 1 to 27. Throw 2 dice and add them together to see how far you need to go. Move that number of places in your direction. If the counter gets to 1 then Minus wins. If the counter gets to 27 then Plus wins.

There is also an interactive version of this on nrich.



HOW TO PLAY

One player is called "PLUS" and the other is called "MINUS", so decide who is who.

Plus moves from left to right and Minus moves from right to left. The children could suggest why this is. Take it in turns to throw the two dice and add up the numbers on the two dice. Move 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.

TO THINK ABOUT

You might think about whether you have to land exactly at 1 or 27 or allowed to end up beyond those points. I wonder what difference it will 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 die and a shorter line.

When you've changed the rules you can talk about whether your change makes the game better to play.