

Key Stage 1 Dice Games

These are a selection of dice games for Key Stage 1 taken from the Nrich website. Please log on to find more ideas by searching for 'dice games' on <http://nrich.maths.org/frontpage>

Tug of War



You will need

2 dice

A number line on paper like this,



How to play

One player is called "PLUS" and moves from left to right.

The other is called "MINUS" and moves from right to left.

Take it in turns to throw 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 if the counter reaches 27, Plus has won.

Think about

You might think about whether you have to land exactly at 1 or 27 or allowed to end up beyond those points. Once you have got used to the game, you might like to make some changes.



Two Dice



Here are two dice. If you add up the dots on the top you will get 7.
Find two dice to roll yourself. Add the numbers that are on the top.
What other totals could you get if you roll the dice again?

Notes for adults

Children can count the total number of spots on the dice or add them together using number facts they already know.

Record the results and explore the different totals that you can get.

Help them to find all the possible combinations.



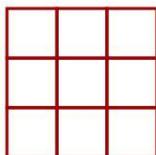
Dotty Six

You will need

A partner

1-6 dice

A 3 x 3 grid like this:

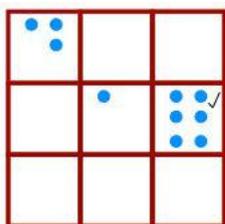


How to play

Take turns to throw the dice and draw that number of dots in one of the boxes on the grid.

Put *all* of your dots in one of the boxes. You can't split them up and you can't have more than six dots in a box.

When a box is full, you could put a tick in the corner like this:



Keep going until there are three ticks in a row or column or diagonal. The winner is the person who puts the last tick. If you can't go, you miss a turn.

Variations

When everyone has played a few times, you can change the game:

- by making the total different (10, 12, 15, 20)
- by giving different dice (with only even numbers, only odds, dice to 10 etc)
- by making the grid bigger (4 by 4)

Key questions

Where will you put your dots? Why?

How do you know where to put your dots?

How many more do you need to win?

Possible support

Small children can use multilink or counters, or Numicon, on a large grid rather than recording with dots on a small one. They could begin with six counters in each box and take away the number thrown on the dice.

Possible extension

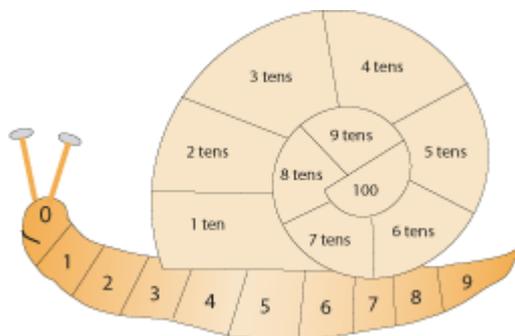
This is a great game for children to use their creativity and to work at a level at which they feel comfortable. The sophistication of their recording will change with their confidence.

Provide a range of dice including blank ones. They could:

- change the total in each box
- make the winner the first to complete a *whole row* that adds to a certain total (e.g. 20)
- change the shape of the grid (triangles rather than squares perhaps)
- use a different sort of number - fractions, decimals, percentages ...
- change the rules completely.

Snail One Hundred

This game is about counting up to 100.



You will need

An ordinary dice, a pair of matching counters for each player and the board which you can download here.

<http://nrich.maths.org/content/id/8303/Snail%20100%20board.pdf>

How to play

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".



Shut the Box

You will need

Two dice

Cards with the numbers 1 to 12 on them.

Aim

The aim of the game is to turn over all the cards. You can turn over the cards that match the numbers on the dice.

How to play

Start with the numbers showing on all the cards.

The first player rolls the two dice. They can turn over the cards which are the same as the numbers rolled. For example, if a 4 and a 5 is rolled, they would turn over the 4 and 5 cards. If a double is thrown, the player's turn ends. They can roll the dice again until they can't turn over any more cards. The cards that are left showing are then added and that is their score.

The dice are then passed to the next player who turns the cards the right way up again and then rolls the dice in the same way as player one. They now can keep on rolling dice as long as each time they can turn over some new cards. When the player can't turn over any more cards, those that are left are added together and that is the player's score.

The winner is the person with the lower score.

It can be played with just one turn each or each player can have a number of turns that you decide at the beginning of the game.

Key questions

How many spots can you see on the two dice?

Which cards will you turn over?

Can you tell me about why you chose to turn those numbers over?

What is good about the game? What is not so good? Why? How could you alter the rules to make it better?

Which cards *could* you turn over? Which would be best? Why?

What else could we change about the game?

Possible extension

By giving learners the chance to invent their own rules, children can take responsibility for their own mathematics and demonstrate their potential. You can use 12 numbered cards instead of 6 and add, subtract or multiply the scores on the two dice together to find the number to turn over. It may be worth considering changing the rule which ends the turn when double is thrown.

Possible support

Most children will find it manageable to use numbers 1 - 6 to start with.