Favorite Dice Games

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Favorite Dice Games

Merry Christmas from Teresa!

I hope you enjoy these quick dice games and the dice in the goodie bag. If for some reason you need more dice, or help with any of these games, please don't hesitate to call or email me for more information.

Have a great Holiday!

Probability

Which Number Wins? (Grades 1–8)

Math concepts: In this individual activity, students roll two dice and record the results. Make a recording sheet that is an 11 x 12 block grid with the numbers 2 through 12 across the top. While young children gain practice with addition facts, older children can examine the data, compare results with other classmates, and think about why some sums are more likely than others. To do the activity, students need two dice and a recording sheet.

The object: to roll the dice and record the number fact in the correct column, stopping when one number gets to the finish line.

How to play: Post a class chart that lists the numbers from 2 to 12 and have students make a tally mark to show the winning sum. Have each child do the experiment at least twice.

After you've collected the data, discuss with the class why it seems that some sums "win" more than others. Young children may not be able to explain it, but older students often figure out that there is only one way to get the sums of 2 and 12, and six ways to get a sum of 7.

After discussing the data, return to the game of Two-Dice Sums and see if students revise their strategies. You may want to ask students to write about the game and the likelihood of two-dice sums

This game is adapted from Marilyn Burns's About Teaching Mathematics (Math Solutions Publications, 1992).

Probability

Probability is an area of mathematics that often doesn't get its fair share of attention in elementary classrooms. The following games should help get you started involving students in thinking about probability ideas while also providing practice with mental addition, experience with strategic thinking, and the opportunity to relate multiplication and geometry.

The Game of Pig (Grades 3–8)

Math concepts: This game for two or more players gives students practice with mental addition and experience with thinking strategically.

The object: to be the first to score 100 points or more.

How to play: Players take turns rolling two dice and following these rules:

1. On a turn, a player may roll the dice as many times as he or she wants, mentally keeping a running total of the sums that come up. When the player stops rolling, he or she records the total and adds it to the scores from previous rounds.

2. But, if a 1 comes up on one of the dice before the player decides to stop rolling, the player scores 0 for that round and it's the next player's turn.

3. Even worse, if a 1 comes up on both dice, not only does the turn end, but the player's entire accumulated total returns to 0.

After your students have had the chance to play the game for several days, have a discussion about the strategies they used. You may want to list their ideas and have them test different strategies against each other to try and determine the best way to play.

This game is adapted from Marilyn Burns's About Teaching Mathematics (Math Solutions Publications, 1992).

Number Sense

As Much With Two As With One

Ages 8+

Materials: two spotted dice or one double die.

Object: To roll the target number first by either adding or subtracting the two numbers that are rolled.

To Start: Each player rolls one die. High roll goes first and play moves to the left. The high roll is also the target number for this round.

On Each Turn: Player 1 rolls the two dice. The numbers rolled are either added or subtracted to try to make the target number. Example: a 5 is the target number - player 1 rolls a 4 and a 5 (4+5=9 too high) (5-4=1 too low) so it is the next person's turn. Once the target number is reached, that player receives a point and a new target number is rolled and play begins again.

Remember the most common numbers when rolling dice from our earlier game 'Which Number Wins' for the younger student.

He Who Throws Most Wins

This is most likely the easiest dice game possible.

Materials: as many dice as desired.

On Each Turn: Divide the dice into two equal groups or take turns with the dice. Roll all the dice and count up the points. Player with the most points wins.

I hope you enjoy these games. They are some of my favorite Dice Games. My students have enjoyed them for many years, and now I hope your students will enjoy them also.

Teresa

Number Sense

Double Trouble Game

6+ years

Materials: 2 dice or one double dice; tally sheet (for keeping score)

Number of players: 2 or more

The goal of Double Trouble is to be the first player to reach 100. The player can keep rolling the dice and adding up their round score, but must beware of rolling doubles! If they roll two of any number, their round score is set to zero and they pass the dice to the next player. The trick is to get a high enough round score, and then pass the dice to the next player before rolling doubles. Play continues back and forth between players until one of you reaches 100.

Students practice their arithmetic skills when adding their round and total scores and other life/mathematical skills: subtraction, estimation and probability, place value and mental arithmetic, strategic thinking, and problem solving.

Rock and Roll

For Intermediate Ages

Number of players: 2 - 4

What you need: Five regular dice for each player

What to do: All players roll their dice at the same time. Players then begin arranging their dice to make the largest five digit number possible. The first player to finish calls out "rock and roll" and verbalizes the result. The other players freeze their numbers in their current order. If the first player done is correct, he earns ten points. If he is incorrect, he earns five points and the remaining player with the highest number receives five points. All other players earn zero. The first player to score fifty points is the winner.

Number Sense

War

Ages 6+

Materials: Two double dice; tally sheet (for keeping score)

Number of players: 2 or more

The goal of War is to add the number rolled on each die (the inside one and the outside one) quicker than the other player. The student who correctly adds his dice wins the round and the point. If a student is incorrect in adding their dice, the other player gets the point. Students practice their arithmetic skills when adding their round and total scores as well as fractions, place value, mental arithmetic, and strategic thinking. Play continues until one player's points add up to 25.

Variations:

Subtraction War: Subtract the smaller number from the larger number instead of adding.

Integer War: Make the inside die be a negative integer and the outside die be a positive integer. Add them together or subtract them using the same rule.

Multiplication War: Multiply the inside die by the outside die.

Fraction War: Players can treat each die like a fraction (similar to Which Is Bigger), but they can add, subtract, multiply or divide the fractions that are rolled.

Students practice their arithmetic skills when adding their round and total scores as well as place value, mental arithmetic, multiplication, addition, subtraction, fraction skills and strategic thinking.

War can be really fast paced and really fun for all players.

Variation: Use Place Value Dice

Place Value War is very helpful to reinforce place value concepts. Start with two place value dice and add the another place value as the student gains confidence. Make sure they say the number correctly.... :)

Number Sense

Which Is Bigger

Intermediate Ages

Materials: Two double dice; tally sheet (for keeping score)

Number of players: 2 or more

The goal of Which Is Bigger is for the players to determine which dice makes a larger fraction. Players take turns rolling the dice. A Player shakes both dice in his hands and drop both dice at the same time. The player that names the larger fraction (with the inside die being the denominator and the outside dice being the numerator). If a player calls out the fraction and is correct they get the point. If the player calls out an incorrect point the point is awarded to the other player(s). Play continues back and forth between players until one of you reaches a set limit (eg: 20 points or 100 points).

Students practice their arithmetic skills when adding their round and total scores as well as fractions, place value, mental arithmetic, and strategic thinking.

Twenty-One

Ages 8+

Materials: One regular die, tally sheet (for keeping score)

Number of players: 2 or more

The goal is to get as close to 21 as possible with an uneven number of rolls.

To Start: Each player rolls one die. High roll goes first and play moves to the left. On Each Turn: Player 1 rolls the die either one, three, five, seven, nine, etc. times and tries to get as close to 21, without going over, as possible. Player cannot stop rolling on rolls two, four, six, eight, etc. If the total exceeds 21, then player is out. The player who is closest to 21 wins the round. If a player gets exactly 21, then they win the round immediately. Play as may rounds as you'd like.

Students practice their arithmetic skills when adding their round and total scores as well as place value, mental arithmetic, and strategic thinking.

Number Sense

Double Dice Addition

6+ years 2- 4 players

Need – 1 double dice (or two regular dice) for each player, counters, markers (or sweets)

Develops basic addition skills.

Each player rolls 2 dice. The numbers shown on a players dice are then added together. The player with the highest number wins the round and takes a counter.

Continue play until a player has a given number of counters, e.g. 10.

Making Change Game

6+ years

Materials: 2 dice or one double dice; one $1 bill, 6 quarters, 2 dimes and 2 nickels for each player

Number of players: 2 or 3

Directions: There is no money in the bank at the beginning of the game. Players take turns depositing money into the bank. To determine the amount they are to deposit, they roll the dice and multiply the total number of dots on the dice by 5 cents. At the beginning of the game, they will be able to count out the exact amounts. Later, they make change from the money in the bank it they don't have the exact amounts. The first player without enough money to put in the bank wins.

Variations: 1) Use two different-colored dice to represent nickels and dimes. Each player starts with three $1 bills in addition to the coins. 2) Use three different-colored dice to represent nickels, dimes, and quarters. Each player starts with six $1 bills and one $10 bill in addition to the coins.