

Place Value Math Games

Place Value Comparisons (Grades 2 +)

Skills: comparing numbers, odd and even

Players: 2 or more

Materials: cards (Ace=1)–9, die

Procedure:

- 1) Place deck face down.
- 2) Each player turns over 2 cards and makes a 2 digit number.
- 3) The die is rolled by one player. If the roll is even, the bigger number scores. If it is odd, the smaller number scores.
- 4) Students record their numbers and scores.
- 5) The first player to score ten points wins.

Variation: Add more cards for more digits.

Place Value or Comparing War (Grades 2–6)

Skills: comparing, place values

Players: 2

Materials: cards (Ace=1)–9

Procedure:

- 1) Deal out the cards evenly.
- 2) Each player turns over 2 cards. The first number turned over is the tens and the second number is the ones.
- 3) Both players call out or write down their numbers. (six tens and two ones equals sixty-two)
- 4) The player with the largest number gets all the cards.
- 5) If there is a tie, WAR is declared. Each player will then place three more cards face down and then turn over two more cards and adds this second number to the first. The player with the largest sum gets all of the cards.
- 6) Play continues until one player has collected all of the cards.

Variation: Players turn over more cards to build larger numbers through the hundreds or thousands.

Place Value Snap (Grades 3–6)

Skills: place values 1–100, immediate recall

Players: 2

Materials: cards (Ace=1)–9

Procedure:

- 1) Two players sit side by side and deal the deck out evenly.
- 2) At the same time, each player turns over one card. One player is assigned the tens number, the other is the ones number.
- 3) The player who names the correct number first (ie. five card, tens number and seven card, ones number is fifty-seven).
- 4) Play continues until one player has collected all of the cards.
- 5) If there is a tie, players leave their cards in a “tie pile.” The pile builds until one player gives a correct answer before the other and takes all of the cards in the tie pile plus the two cards just turned over.

Variation: Play with more cards and build larger numbers.

You Take the High Road (Grades 3 +)

Skills: four digit place value, comparing numbers

Players: 2

Materials: cards (Ace=1)–9, die, paper, pencil

Procedure:

- 1) One player rolls the die to determine if players will build the smallest or largest number. (odd roll=smallest number, even number=largest number)
- 2) Players then draw four cards each and make their numbers.
- 3) Players then verbalize their number to their opponent and record their number.
- 4) Players compare numbers. The player with the largest/smallest number scores a point.
- 5) Players continue to alternate turns until a set number of points is reached. (10–20)

Variation: Play with larger groups. Challenge players to use six cards for numbers through the 100,000's.

Hundreds Chart Tic-Tac-Toe (Grade 2 +)

Skills: Identification of place value

Players: 2

Materials: 1 hundreds board, cards (Ace=1)–9, paper, pencil, markers (2 different colors)

Procedure:

- 1) Players select a color of marker. The goal is for a player to get three or more of their markers in a row either vertically, horizontally, or diagonally.
- 2) Player 1 draws two cards and makes a 2 digit number and verbalizes it to their partner. (Ex. Six tens and three ones equals sixty-three)
- 3) Player 1 then covers that number with their marker.
- 4) Then, this player verbally gives the other number that they can make with their 2 cards. (ie. thirty-six) and covers that number.
- 5) Player 2 then takes their turn repeating steps 2–4.
- 6) Play continues until one player gets three or more of their markers in a row. When this happens, this player scores two points for each marker in a row. (ie. six points for three in a row, eight points for four in a row, and so on.)
- 7) Players can steal an opponent's space. When a player makes a number already occupied by their opponent, they can replace it with their own marker. For each number stolen, they receive 5 points.
- 8) If a player draws two cards that they have already drawn, two new cards may be taken.
- 9) Players can play until a set time limit is reached or they reach a certain number of points.

Trade In (Grades 4–6)

Skills: place value of 5 digit numbers

Players: 2 or more

Materials: cards (Ace=1)–9, die

Procedure:

- 1) The goal is for players to make either the smallest or largest number.
- 2) Player one rolls a die. (odd roll=smallest number, even number=largest number)
- 3) Players each take five cards from the top of the deck and place them face down in front of them.
- 4) Player 1 flips over the card in the ones place and then decides whether to keep this card or trade it in for the top card of the deck.
- 5) Players alternate turns and continue to flip over cards working up to the card in the ten thousands place.
- 6) The player with the biggest/smallest number scores one point.
- 7) Play to a set number of points.

Variations: Use 6 cards for more digits.

Rock N' Roll (Grades 4–6)

Skills: recognizing place values through ten thousands quickly

Players: 2–4

Materials: 5 dice per player

Procedure:

- 1) All players roll their dice at the same time.
- 2) Players then arrange their dice to make the largest five digit number possible.
- 3) The first player to finish calls "Rock N' Roll," and CORRECTLY verbalizes their number to the other players.
- 4) The other players must free their numbers in the current order, even if they aren't finish arranging them.
- 5) If the first player done is also the player with the largest number, they earn 10 pts. If not, they only earn 5 pts. and the player with the highest number also earns 5 pts.
- 6) All other players earn 0.
- 7) The first player to 50 pts. is the winner.

Variation: Use 6 cards for more digits.

Six Digit Traveller (Grades 4-6)

Skills: Identifying place value of 6 digit numbers

Players: 2-4

Materials: cards (Ace=1)-9, die, paper, pencil

Procedure:

- 1) Each player takes six cards from the deck and makes a six digit number. Arrange the cards face up in the order that they appear.
- 2) Players take turns rolling the dice, verbalizing the value of the number that the die indicates and scoring points for the number in that place. (Ex. 162849 rolls a 4 - verbalizes 2 thousands and scores two points.
- 3) Players take six new cards, arrange their numbers and repeat.
- 4) Play continues until they reach a set score or a set number of rounds are played.

Rollin' on Place Value (Grades 3-6)

Skills: Place value with 6 digits, comparing numbers

Players: 2

Materials: one die per pair, **Stratedice** Board

Procedure:

- 1) Player 1 rolls a die and selects the best place value position in their row. For example, if player 1 rolls a 2, the "tens" position might be chosen. Player 2 might roll a 5 and place it in the "ten thousands" position in their row.
- 2) Once the place has been selected, students write that number in that place on the board. It cannot be changed once it's been chosen.
- 3) Players alternate taking their remaining five rolls, each building their own hundred thousands number - keeping in mind the goal of the game is to create the largest number possible.
- 4) Once all dice have been placed, players verbalize their number and compare them to determine the player that has made the greatest number.
- 5) Play continues into round two and if necessary a third round is played to determine the overall winner.

Variation 1: Decrease level of difficulty by building smaller numbers.

Variation 2: Players can build the smallest possible number. A roll of 1 or 2 is now considered nice!

Rounding Off Big Time (Grades 4 +)

Skills: rounding numbers, place value

Players: 1 or more

Materials: cards (Ace=1)-9, **reproducible game board**, pencil

Procedure:

- 1) Each player turns over three cards to make a 3 digit number.
- 2) Player decides on which number to make and rounds to the nearest hundred to know which space to fill on their gameboard.
Example: 7, 3, 8 can be 738, 783, 837, etc...
- 3) Player then writes the chosen number on the gameboard opposite the space it was rounded to. Example: If you had 387, you would write that next to 400 on your gameboard because that's what it rounds to.
- 4) If the player rolls and makes a number they can't place anywhere on their gameboard, they lose a turn.
- 5) The first player to fill their gameboard wins.

Rounding Off Game Board

100	_____
200	_____
300	_____
400	_____
500	_____
600	_____
700	_____
800	_____
900	_____
1,000	_____

Finish First (Grades 2 +)

Skills: Expanded form, Standard form, and Word form (100's-100,000's)

Players: 1 or more

Materials: 6 dice per student

Procedure:

- 1) Players roll all 6 of their dice and create a number with the dice.
- 2) They must then write the number in standard form, word form, and expanded form as quickly as possible.
- 3) The first player to finish calls "Finished First."
- 4) The player who finishes first can give themselves a point.
- 5) Play continues until a player reaches 5.

Variation 1: Students can play by themselves just for practice.

Variation 2: Reduce the number of die to work on smaller place values.

Who Is Closer? (Grades 3 +)

Skills: comparing numbers, expanded form, reading numbers

Players: 2

Materials: cards (Ace=1)-9, 4 dice per pair

Procedure:

- 1) Each player draws 4 cards and lays them out face up.

Example: cards drawn 6 5 7 2

- 2) Each player then rolls their 4 dice and builds and verbalizes their number.

Example: 4 2 6 3

- 3) Players then attempt to build a number with their cards that is closest to their rolled number.

Example: Player would build 5,267 because that is the closest number to 4,263.

- 4) Players then compare whose card number was closest to their rolled number.

- 5) The player closest to their rolled number takes all the other player's cards.

Variation: You can use this activity for rounding. Players round both their rolled numbers and their cards. The player closest to their rolled number takes all of the cards.

Digit Place (Grades 3 +)

Skills: place value of numbers

Players: 2 or more

Materials: gameboard, paper, pencil

Procedure:

- 1) Each player draws the gameboard. Add more columns

Guess	Digit	Place

- 2) Players or teacher determines the amount of digits for the numbers in the game. For example, if you are working on hundreds, you would do three digit numbers. The first time you play, you probably want to start with just two digits.
- 3) Player 1 thinks of a 2 digit number and writes it somewhere so they don't forget their number. Make sure player 2 doesn't see the number. Example: 36.
- 4) Player 2 guesses a two digit number. If player 2 guesses either a digit or place, Player 1 fills in the chart. See example board below: Player 2 guesses 50 and had neither the digit nor the place correct so player 1 writes 0's in both of those places on the chart.
- 5) Play continues until Player 2 guesses number.
- 6) Player 2 then writes a mystery number and Player 1 guesses numbers until he/she has guessed the correct number.

Guess	Digit	Place
50	0	0
43	1	0
37	1	1
36	2	2

* The second guess had 1 digit correct but it was in the wrong place. Player 2 must now decide which digit is correct. So on the next guess, player 2 decided to change the place of the 3 to see if that was the digit that was correct. You get the idea.

Hundreds Chart

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	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

