



DECA DICE

Primary



REVISED BY JANE FELLING

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BOX CARS AND ONE-EYED JACKS

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ISBN

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TWEENIES

LEVEL: Grade 1 - 3

SKILLS: comparing numbers 0 - 90

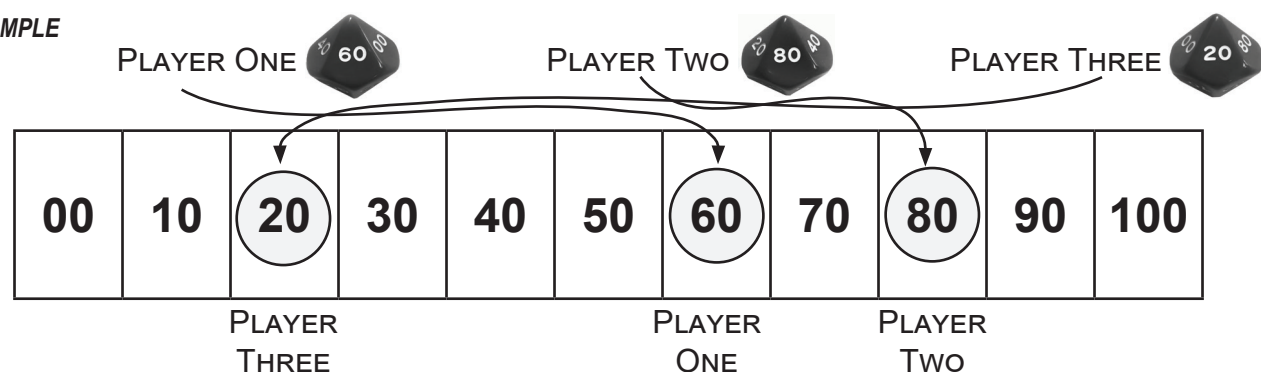
PLAYERS: 3

EQUIPMENT: One decadic (00-90) per player, bingo chips or other counters, decade number line (see page 36)

GOAL: To arrange rolled numbers in order from least to greatest and try to have the "between" number to win the round

GETTING STARTED: Each player rolls one die and says their number out loud. Players compare their numbers. The "Between" or "Tweenie" number wins the round and takes a counter. It may be helpful for players to have a number line.

EXAMPLE



Players verbalize as follows:

Player Two says "80 is the greatest". Player Three says "20 is the least". Player One says "60 is between 80 and 20" and earns 1 point. Play continues for a set period of time. The player with the most points wins.

If two players roll the same number, a counter is placed into a "tie break" on the number line. Players re-roll; the between roll earns the point for "between" and also takes the counter for the "tie break".



JOURNAL WORK AND EXTENSIONS:

1. After a set period of time should players have about the same amount of points? Explain. Compare your answer to your game.
2. Record all the rolls during play. What were your lowest and highest recorded "Tweenie" wins?
3. Did the players in your group earn an even number of points? How many rounds do you think you need to play to "even it out"?

TWEENIES



VARIATIONS:

- Each player needs one (0-9) die and one decadie (00-90). All players roll two dice and create a hundreds number between 0 and 990. Have players build their numbers on a chart as follows:

HUNDREDS	TENS
	

= 860

Or you can have the players build their numbers using one 000-900 die and one decadie (00-90).

HUNDREDS	TENS
	

= 420

PLAYER ONE	PLAYER TWO	PLAYER THREE
 	 	 
420	860	100

Eight hundred sixty is greatest, one hundred is least, four hundred twenty is between. Player One scores the point.

- (Grade 3) Players roll 4 dice as follows, then compare for between.

			
0-9 die	000-900 die	00-90 die	0-9 die
THOUSANDS	HUNDREDS	TENS	ONES

6,426

- Have players roll their dice secretly. Players may choose to arrange their dice and set them once done. All players reveal their numbers. The between number wins.

- Easy to play
 - fun
 - 90's and 00's can't win
 - the lowest "between" was 10
 - the highest "between" was 80
 - the most frequent "between" was 30 and 50
 - we had ties 3 times
 - almost 1/2 the rolls in "greatest" column were 90's.

TWEENIES RECORDING SHEET

	LEAST	BETWEEN	GREATEST
CIRCLE YOUR WINNING (BETWEEN) ROLLS			
Roll 1	10	40	90
Roll 2	50	70	90
Roll 3	00	50	90
Roll 4	20	80	90
Roll 5	40	70	90
Roll 6	40	50	80
Roll 7	00	10	40
Roll 8	20 / 20		70
Roll 9	10 / 10		50
Roll 10	00	10	90
Roll 11	10	30	80
Roll 12	30 / 30		60

4 Points

TWEENIES RECORDING SHEET

	LEAST	BETWEEN	GREATEST
CIRCLE YOUR WINNING (BETWEEN) ROLLS			
ROLL 1			
ROLL 2			
ROLL 3			
ROLL 4			
ROLL 5			
ROLL 6			
ROLL 7			
ROLL 8			
ROLL 9			
ROLL 10			
ROLL 11			
ROLL 12			

TEN FOR ME

- LEVEL:** Grade 1 - 3
- SKILLS:** addition, patterning, place value, locating numbers on a hundred board
- PLAYERS:** 2
- EQUIPMENT:** one decadic (00-90), one ten-sided (0-9) die per player, gameboard
- GOAL:** to be the first player to fill in ten spaces on their gameboard in any direction (horizontally, vertically, or diagonally)

GETTING STARTED: Each player needs their own gameboard. To begin, Player One rolls the decadic and ten-sided die together and adds these to find their sum.

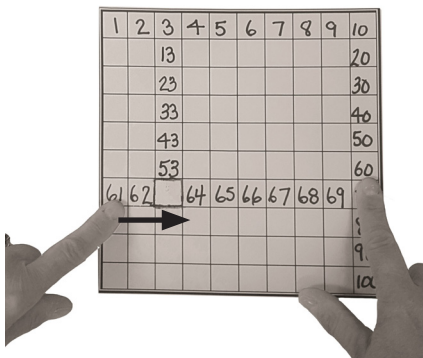
EXAMPLE: Player One rolls:



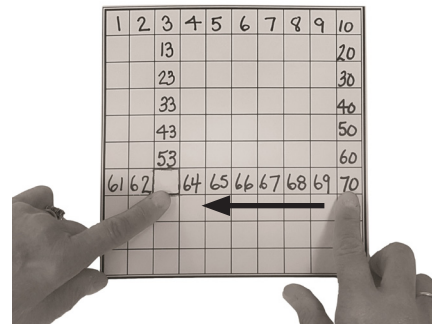
Player One fills in 63 in the appropriate space on their gameboard.

If a player rolls and the corresponding space has already been filled in, that player misses their turn. Players alternate rolling and filling in their own gameboards until one player has successfully filled in ten consecutive spaces in any direction. This player then verbalizes “Ten for Me” and wins the game.

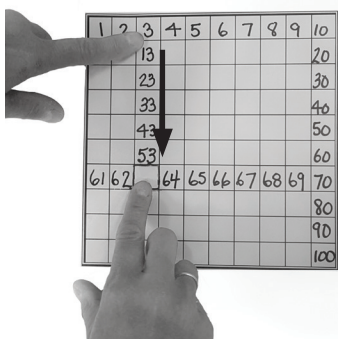
Students can use a variety of strategies to locate their rolled numbers on the hundred board:



1. COUNT ON from the DECADE BENCHMARK touch 60, count on 62, 62, 63.







2. COUNT BACK from the DECADE BENCHMARK touch 70, count back 69, 68, ... 64, 63.



3. Start on the top row and find the numbers with the COMMON ONE'S PATTERN find 3, move down 3, 13, 23, 33, 43, 53

TEN FOR ME

TEACHING NOTE: For younger students it may be helpful to fill in 1-10 and 10-100 on their gameboards. This will provide students with BENCHMARKS for locating their rolled numbers. With experience these benchmarks can be removed and students can choose to roll a single 0-9 die to fill the upper row or a single 00-90 die to fill the 10-100 row. The number 100 can be captured with either a   roll or a   roll.


VARIATION:



1. Have students roll two 0-9 dice.

e.g. Roll   or could be  . Which is better to help with 10 in a row?

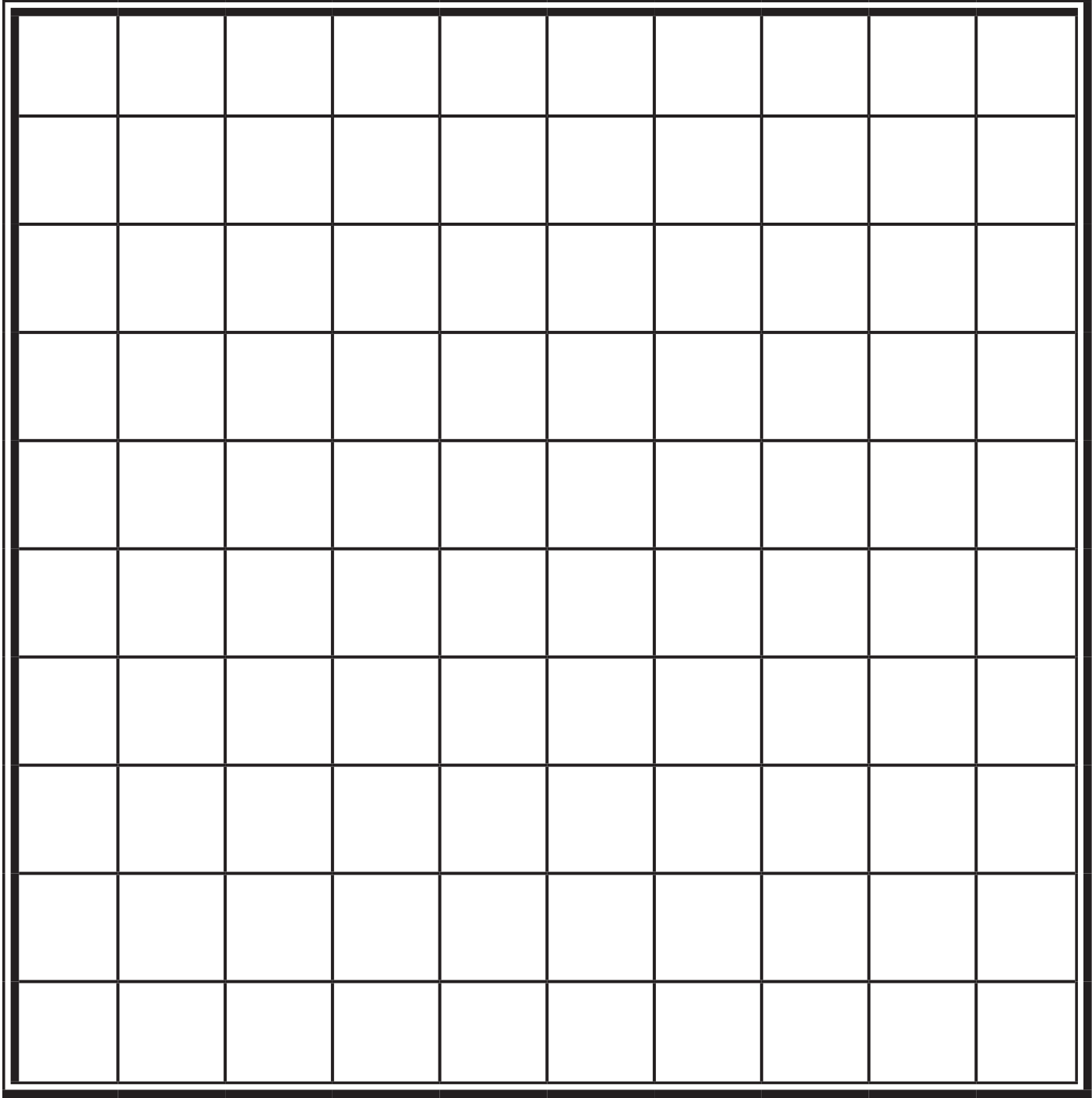
Players must analyze if it is better to cover ninety-two (92) or twenty-nine (29) or players may cover both possible numbers (unless doubles are rolled).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16		18		20
21		23	24			27	28	29	30
	32		34				38		40
41	42	43	44	45	46	47	48	49	50
51		53	54					59	60
	62				66	67			
	72		74	75		77		79	
			84						90
			94			97		99	100

I Won against my sister 

What did this game teach? 
 It helps with multiplication. Because of the groups you can jump to a number. This game makes you look for patterns. It helps with subtracting too. And counting back to find the right space, to put the number in. This game was fun, you had to concentrate. I'm going to teach my friends. 

TEN FOR ME GAMEBOARD



ROLL A 100

LEVEL: Grade 1 - 3

SKILLS: adding 10's to 100, probability *VARIATION:* subtraction

PLAYERS: 2 - 4

EQUIPMENT: four decadice (00-90), recording sheet

GOAL: to find numbers that equal the sum of 100

GETTING STARTED: Have students warm up by playing Decadice Addition Face Off on page 24 to help practice adding 10's.

To begin, Player One takes all 4 decadice, rolls them, and finds combinations that equal the sum of 100. Players will use the scoring chart below to count points for each round.

ANY 2 DECADIE = 100 - 2 POINTS
ANY 3 DECADIE = 100 - 3 POINTS
ANY 2 SEPARATE COMBINATIONS (40+60) ; (70+30) = 100 - 4 POINTS
ALL 4 DECADICE = 100 - 6 POINTS

ROUND ONE:

Player One rolls:



Player One selects $80 + 20 = 100$ and earns 2 points.

Player Two rolls:



Player Two selects $50 + 50 = 100$ and earns 2 points.

ROUND TWO: Players may combine more than two dice to equal 100. For example:

Player One rolls:



Player One selects $50 + 40 + 10 = 100$ and earns 3 points.

Players may have two separate combinations to earn 4 points. For example:

Player Two rolls:



Player Two selects $80 + 20 = 100$ and $40 + 60 = 100$ and earns 4 points.

ROUND THREE: Players earn 6 points if all four die equal 100. For example:

Player One rolls:



Player One selects $20 + 30 + 40 + 10 = 100$ and earns 6 points.

Players continue to alternate rolling the dice. In the event that a player rolls no combinations that equal 100, the player earns 0 points for that round.

e.g..



This can happen!

ROLL A 100

JOURNAL WORK & EXTENSIONS:

1. How many different combinations (on the four decade dice) would result in no sums of 100? Predict and then set your dice to figure out the combinations.
2. With a partner roll out 25 combinations of four decade numbers and record all that have no sums of 100. Compare your findings with another group. Were there more or less than you expected? Explain.

VARIATIONS:

1. Players roll all four dice once. They may select any dice to freeze and re-roll the other dice to a maximum of three rolls. Players are trying to create a three or four-addend combination to equal 100. Players strike out if they go over 100. Players may freeze after any roll.

EXAMPLE:

Player One rolls:



Has: $30 + 20 = 50$

Player One re-rolls 60 and 70 and gets:



Now has: $40 + 30 + 20 = 90$

Player One re-rolls 80 and gets:



freezes and adds to total

At this point, Player One has: $50 + 40 + 30 + 20 = 140$

Player One verbalizes "50 + 40 + 30 + 20 = 140", strikes out and earns no points.

2. Players can use both addition and subtraction to equal a target of 100.

EXAMPLE:

Player One rolls:



Player One selects $60 + 50 - 10 = 100$ and earns 3 points.

ROLL A 100 RECORDING SHEET

SCORING SYSTEM

ANY 2 DECADIE (e.g. 80 + 20) = 100	2 POINTS
ANY 3 DECADIE (e.g. 60+10+30) = 100	3 POINTS
ANY 2 SEPARATE COMBINATIONS (e.g. 40 + 60) ; (70 + 30) = 100	4 POINTS
ALL 4 DECADICE (e.g. 10 + 20 + 60 + 10) = 100	6 POINTS

ROUND	RECORD YOUR SUMS OF 100	POINTS EARNED
TOTAL POINTS EARNED		