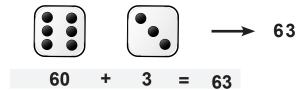


Dice and cards are great manipulatives for introducing, practicing and extending place value concepts, including:

- comparing 10's 1's
- comparing 100's 10's, 1's
- reading numbers properly
- extending groups of place value to written standard form

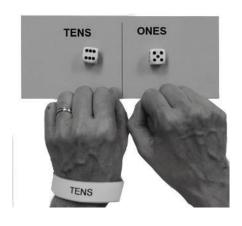


The following teaching notes will help maximize learning for your students:

 Have players always sit side-by-side when working with place value concepts. This will help ensure they are reading numbers correctly and will allow for comparing numbers properly.



- 2. Have students play on place value mats when necessary to provide the proper language/vocabulary and building numbers properly from left to right. Fun Foam sheets purchased from dollar stores or craft sections of large retail stores work great. For reproducible Place Value Mats see pages 118 and 119.
- TENS ONES
- 3. Use plastic wrist bands, inexpensively found at dollar stores, to help students with the language. Ensure wrist band is on the correct hand.

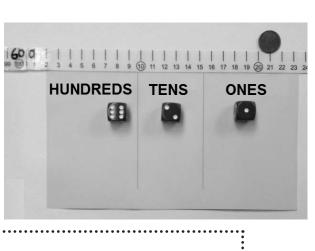


- 4. If indicated in the rules use the reproducible gameboards. They have the place value vocabulary right on them, lending support to those students still needing structure with place value concepts.
- 5. Remember Base Ten Place Value Manipulatives should be used to support the games when students need more concrete experience with place value.



Shown is 2 tens, 4 ones = 24 using small red solo@ cups and grouping 10 under a large plastic cup, perfect for place value. The clear TENS cup is a powerful visual for showing that "10" is composed of "10 ONES".

6. 0-100, 0-1,000 number lines can also be used to support learning.

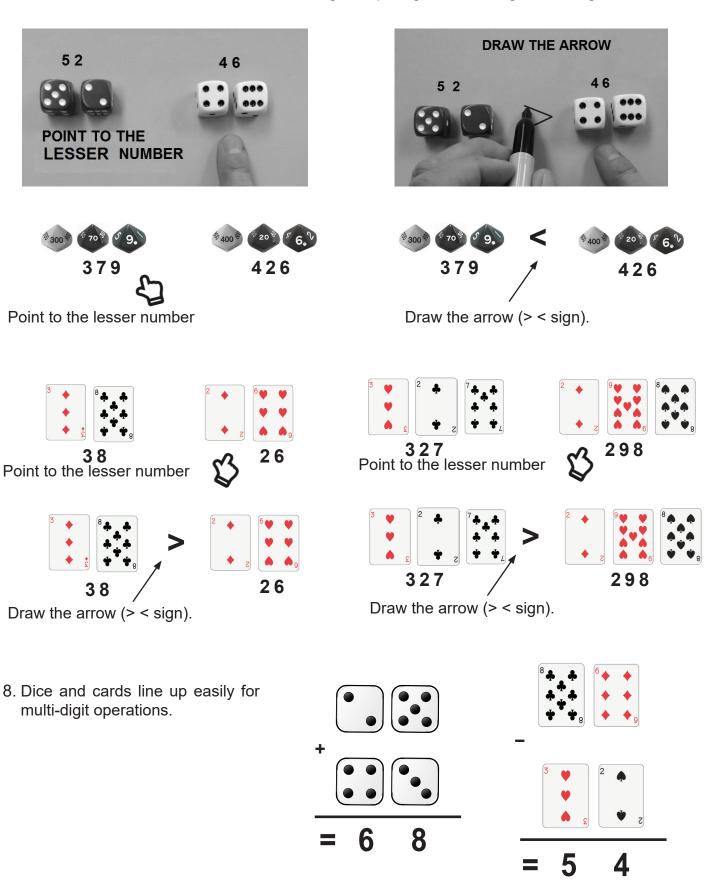


WE TAPE TOGETHER TEN "1-100" NUMBER LINES USING CLEAR PACKING TAPE TO JOIN THEM. WE WRITE ON THE NUMBER LINE 000, 100, 200, 300.....1,000 FOR REFERENCE. IN THE SAMPLE, BENCHMARK 600 IS SHOWN AND THE NUMBER 621 IS REPRESENTED WITH DICE; BINGO CHIPS MARKING THE NUMBER..



JANE IS STANDING ON BENCHMARKS 600 AND 700 TO ROUND TO NEAREST 100.

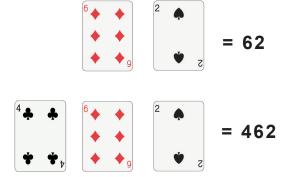
7. Dice and cards can both be used for building, comparing and teaching the > < signs.



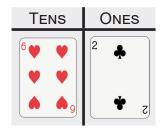
#### **CARDS**

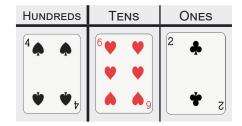
Many of the games in <u>Shuffling into Math</u> use cards, they provide endless opportunities to explore number sense and place value.

For our games we remove all the 10's, Jacks, Queens and Kings. Jokers can be used as zeros. Aces will aways be used at 1's. With this combination we can build all place value numbers:

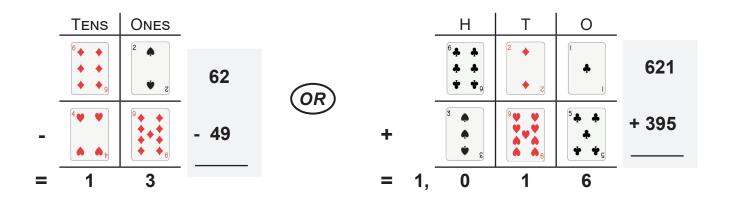


Using fun foam also structures the math:





With 1-9 cards we can also perform multi-digit operations:



FOLLOWING ARE CHECKLISTS THAT CAN BE USED WHEN STUDENTS ARE PLAYING PLACE VALUE GAMES.

# PLACE VALUE TENS AND ONES SKILLS CHECKLIST

Name	Recognizes 10 as a unit	Combines one 10 and ones to 19 without counting	Counts by 10's to 100	Identifies number when 10's, 1's are known	Matches 10's, 1's to Number Line or Hundred Board	Identifies by name number of 10's in any two-digit number	Adds or subtracts 10 mentally to any two-digit number	Represents any two- digit number pictorially	Decomposes any two- digit number pictorially

# PLACE VALUE 100'S SKILLS CHECKLIST

Name	Recognizes 100 as a unit	Mentally adds or subtracts 10, and 100 from a three-digit number	Describes any three-digit number in terms of its value in ones, tens, hundreds	Represents any three- digit number pictorially	Decomposes any three- digit number pictorially	Records standard and expanded form 626 = 600 + 20 + 6

## PLACE VALUE FACE OFF

**LEVEL:** Grade 1

**SKILLS:** read, compare and order numbers to 100, variation to 999

PLAYERS: 2

**EQUIPMENT:** cards (Ace=1) - 9, gameboard or place value mat (page 118-119); for

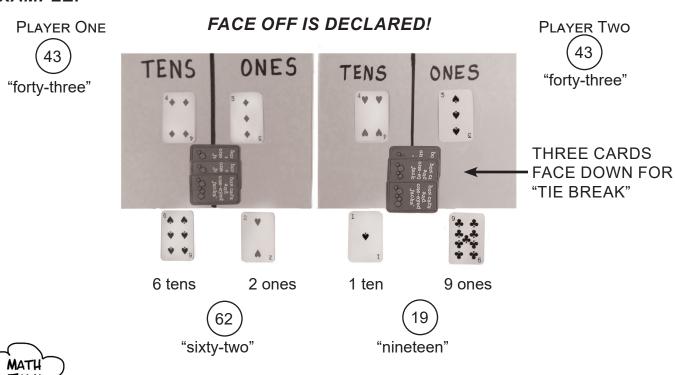
variation use 0-9 dice, 00-90 dice

**GOAL:** to be the player with the greatest number and collect the most cards by the

end of the game

**GETTING STARTED:** Players divide cards evenly between themselves. Each player turns over two cards and places them onto the gameboard. The first number turned over is the tens number and the second is the ones. Both players say their numbers. Have them verbalize, for example, "six tens and two ones equals sixty-two". The player with the greatest number gets all cards. In the event of a TIE (ie. each player has the same number) FACE OFF is declared. First, each player places three cards face down. Then, each player turns over two cards, building a two digit number. The player with the greatest number gets all of the cards. Play continues until one player has collected all of the cards.

#### **EXAMPLE:**



Player One verbalizes "sixty-two is greater than nineteen because 6 tens are greater than 1 ten" and collects all of the cards.

**NOTE:** Rules can be changed to play for LEAST number winning.

# PLACE VALUE FACE OFF GAMEBOARD II

		ONES		
	900 1000	Ō		
		SNAT		TWO
	800			PLAYER TWO
	700	REDS		ш
	009	HUNDREDS		
,	200			
	400	ONES		
	300			
	200	TENS		PLAYER ONE
	100			PLAYE
	000	HUNDREDS		
		©Box Cars an	d One-Eyed Jacks	9/2

MY NU	IMBER	MY PARTNEI	R'S NUMBER
TENS	ONES	TENS	ONES

# PLACE VALUE FACE OFF RECORDING SHEET II

N	IY NUMBE	R	<	MY PAR	TNER'S N	UMBER
HUNDREDS	TENS	ONES	> =	HUNDREDS	TENS	ONES
	• • • • • • • • • • • • • • • • • • •					
	•					
	•					
	•					
	•					

## **BETWEENERS**

**LEVEL:** Grade 1-2

**SKILLS:** know number names, compare three numbers as > < or between

PLAYERS: 3

**EQUIPMENT:** cards (Ace=1) - 9, or 6 x 0-9 dice, place value mats, 0-100 number line

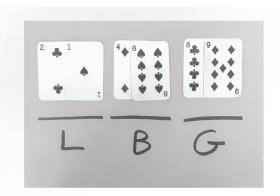
GOAL: arrange numbers in order from least to greatest, to have the middle

(between) number and win the round

#### **GETTING STARTED:**

If playing with dice: Each player rolls 2 dice and creates a two-digit number on their place value mats; right hand equals tens value, left hand equals ones value.

If playing with cards: Players can draw cards; first card equals tens value, second card equals ones value. Players then place their numbers on to the 0-100 number line.





Players now verbalize as follows:

"Eighty-nine is the GREATEST, twenty-one is the LEAST, forty-eight falls BETWEEN eighty-nine and twenty-one.

The player with the BETWEEN number scores a point for the round. It is important that students use a horizontal number line to visually see greatest, least and between.

Players re-roll their dice or draw cards for the next round and compare their new numbers. There may be some rounds where ties occur; no player would earn a point.

#### **EXAMPLE:**

PLAYER ONE

TENS	ONES
g 6.°	628

**PLAYER TWO** 



PLAYER THREE



Sixty-two is equally GREATEST, twenty-one is LEAST. There is no BETWEEN number, or points scored for the round.

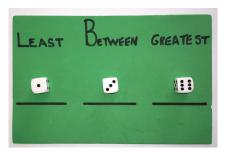
## **BETWEENERS**

#### JOURNAL WORK AND EXTENSIONS:

- 1. Have students complete a game using the Recording Sheet on page 139.
- 2. Allow students to decide how to arrange their numbers. Players will need to use a TENS and ONES place value mat. They must roll a die (or draw a card) as their first numeral and decide if the value will be placed on to their tens or ones value on the mat. Once placed it cannot be moved. The second rolled die (or drawn card) is placed on to the open space. Players then compare as in regular Betweeners.

#### **VARIATION:**

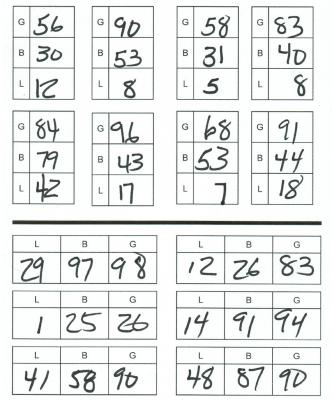
 To accommodate learners who are not ready for place value to 100, substitute 1-12 or 1-20 dice.





ROII	Least	Between	Greatest
1	4	6	9
2	2	3	4
3	1	П	5
4	4	5	6
5	3	5	8
. 6		フ	10
7	6	8	10
8	7		111
9	9	10	11
10			

STUDENT SAMPLE
GRADE ONE EARLY SCHOOL YEAR
WORKING WITH CARDS 0-12



STUDENT SAMPLE
GRADE ONE, WORKING WITH 0-9 DICE

# **BETWEENERS RECORDING SHEET**

										_
G		G			G			G		
В		В			В			В		
L		L			L			L		
G		G			G			G		
В		В			В			В		
L		L			L			L		
	L	В	G			L	E	3	G	
	L	В	G			L	E	3	G	
	L	В	G	7		L	E	3	G	

## WHO'S IN BETWEEN?

**LEVEL:** Grade 1-2

**SKILLS:** place value to 100, between

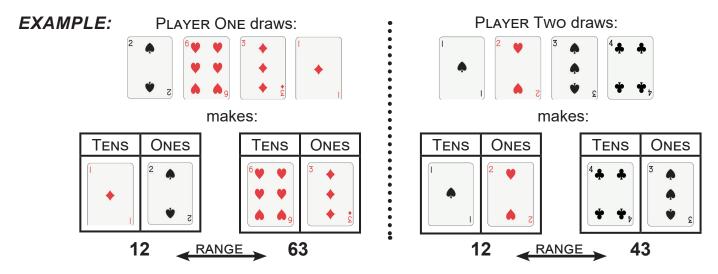
PLAYERS: 2

**EQUIPMENT:** cards (K=0, Ace=1) - 9, place value mats, 0-100 number lines

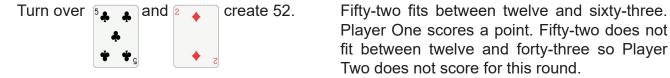
**GOAL:** to build a two-digit number that fits in the established range

#### **GETTING STARTED:**

**STEP ONE:** Each player draws four cards to create two, two-digit numbers. Using the place value mat, have players build the greatest possible and least possible numbers with the cards, in order to create the greatest possible spread (DIFFERENCE) between the two numbers.



**STEP TWO:** After players have made their two numbers, only two more cards are turned over for both players to use. The first card is the tens number, the second card is the ones number. Players now check to see if this two-digit number falls BETWEEN the two numbers they have made in Step One. Players score a point if it falls between the two they have made.



Players draw four new cards and make two new two-digit numbers, again trying to create the greatest difference as possible between the two. Two new cards are turned over for comparison. The first player to reach twenty points is the winner.

# BUMP UP AND BACK RECORDING SHEET

Bump Back	I SAW	Bump Up	Bump Back	I SAW	Bump Up
Bump Back	I SAW	Витр Ир	Bump Back	I SAW	Bump Up

# TENS AND ONES PATTERNS RECORDING SHEET

My Number 62	My Pattern +2	64	, 66	, 68	, 70	, <u>72</u>
My Number	My Pattern					
My Number	My Pattern					

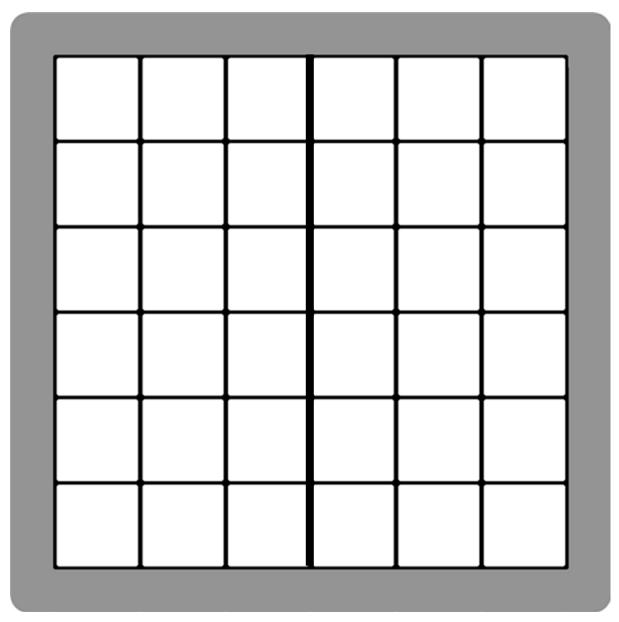
# HUNDRED PATTERNS RECORDING SHEET

My Number 367	My Pattern +10	377	, 387	, 397	, <b>4</b> 07	, <u>4</u> 17
My Number	My Pattern					
My Number	My Pattern					
Humber						

## PLAYER ONE

### PLAYER TWO

HUNDREDS TENS ONES HUNDREDS TENS ONES



- ▶ Each player takes 18 dice of the same color.
- ▶ Each player rolls three dice and creates a 100s, 10s, 1s number.
- ▶ The player with the greater number places the dice into their side of the tray.
- ▶ The player with the least number places their dice into the lid.
- ▶ The player with the most dice on their side of the tray at the end of the game wins.

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