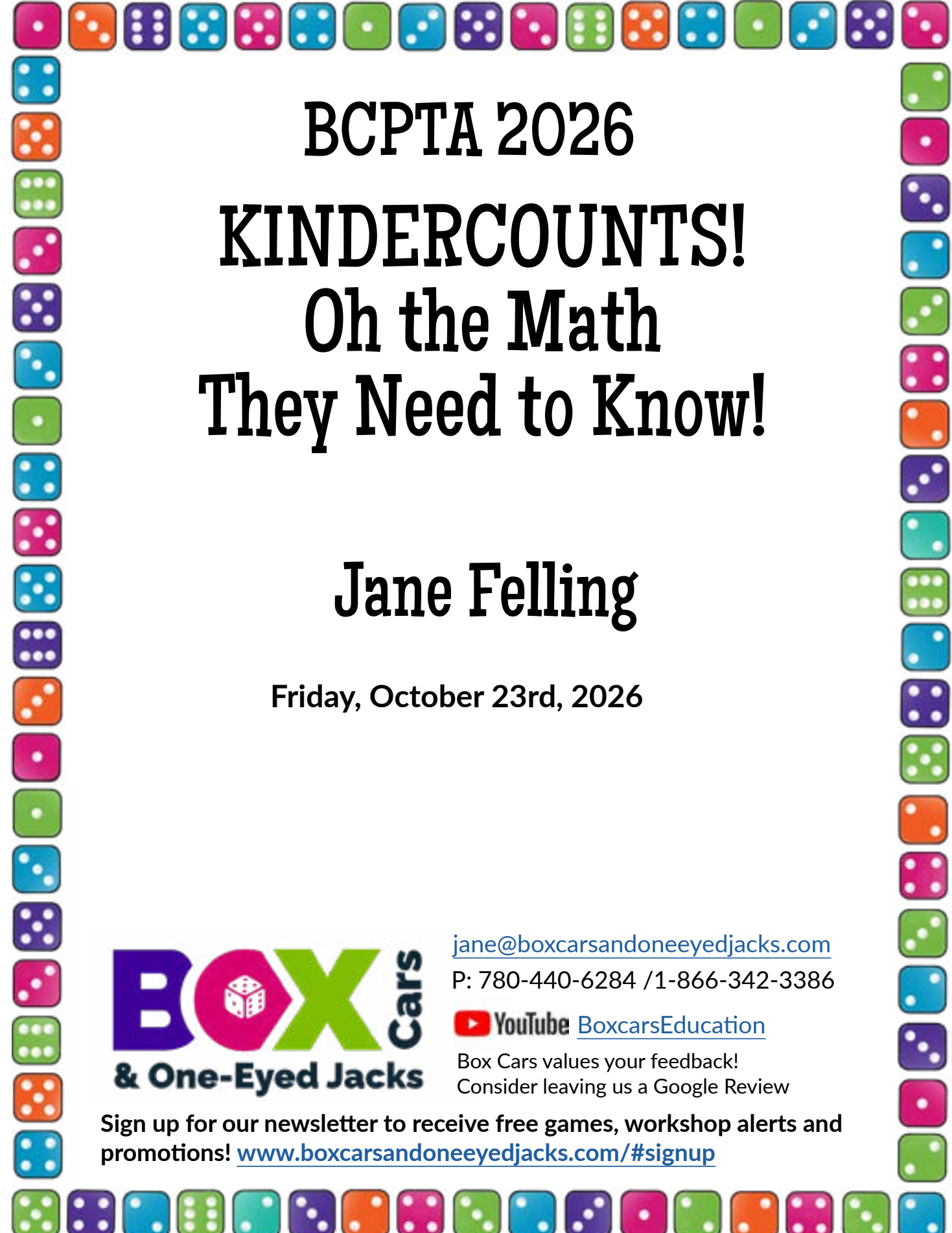




BCPTA 2026

KINDERCOUNTS!

Oh the Math They Need to Know!

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Big Ideas of Early Numeracy

1. One-to-One Correspondence

- Each item can be Counted Once and Only Once.
- Foundational early math skill where you match each item in a group to one unique number word, ensuring each object is counted exactly once and in order.
- Crucial in learning to count, moving from rote memorization to understanding that each number represents a specific quantity

2. Stable Order

- Using a list of words to count in a repeatable order
- Must be at least as long as the number or items to be counted
- Progresses to Count on/Count back

3. Cardinality

- Understanding that the last number used to count a group of objects represents how many are in the group

4. Conservation

- Understanding that the count for a set group of objects stays the same no matter whether they are spread out, close together or rearranged

5. Order Irrelevance

- The order in which items are counted is irrelevant.
- Students are able to count a group of items from different places (ie left to right or right to left)

6. Subitizing

- Ability to see or visualize a small amount of objects without counting
- Perceptual Subitizing - know how many without thinking
- Conceptual Subitizing - you're still able to "see" how many, but the number is too large without decomposing into two or more smaller group, ie, $7 = 4$ and 3

7. Hierarchical Understanding

- Understanding that all numbers preceeding a number can be or are systematically included in the value of another selected number
- Ie, Within 5 items, there is also a group of 4 items within that group (and so on)
 $5 \rightarrow$ composed of 3 and 2
Decomposing 6 $\rightarrow$ 4 and 2

8. Understanding Magnitude

- Understanding that as you move up the counting sequence $\rightarrow$ forwards the quantity increases by 1, and as you move down $\leftarrow$ backwards, the quantity decreases by 1.
- Counting is ordered by magnitude

Alphabet A _____ Z

1 _____

26 _____

10 Math Breaks With a Demo Deck!

- 1. Subitizing**
- 2. Count On with number lines**
- 3. Count Back with number lines**
- 4. Pattern Count Forward & Back
with a ruler or number line**
- 5. Doubles**
- 6. Doubles +1, Doubles -1
Doubles +2, Doubles -2**
- 7. Make 10, Make 20**
- 8. Odd/Even**
- 9. Ten/Ones**
- 10. Make Decades**

PAIR THEM UP

- LEVEL:** Pre-Kindergarten - Grade 1
- SKILLS:** learn number names, recognize numbers as same/different, count using one-to-one correspondence
- PLAYERS:** 2 - 4
- EQUIPMENT:** die, deck of cards (remove Jokers, Jacks, Queens & Kings)
- GOAL:** identify and match the numbers on cards to make pairs

GETTING STARTED:

The deck is placed face down. Player One then rolls the die and takes the number of cards indicated by the roll of the die. (ie: rolls a three and takes three cards off the top of the deck) Player One then looks to see if they can make a pair. When a player has a pair, they place it face down in front of themselves and keep their remaining cards in their hand. Player Two takes their turn repeating the process. Play continues until all of the cards from the deck are used. Any cards left in the players' hands that can't be paired up don't count. The player with the most pairs is the winner.

MATH JOURNAL WORK AND EXTENSIONS:

1. In their math journals, give students time to create a chart of the pairs they made and the pairs their partner made. After, have them write how many pairs they had in total as well as how many pairs their partner matched. They then would either circle the total of the winning amount of pairs or write a sentence declaring themselves or their partner the winner.
2. As an extension for fast finishers or for an extra challenge, players may then figure out how many more the winner won by. If they are not yet able to subtract, lining up their pairs of cards in a row with their partners would allow them to see which player has more pairs and by how many.

VARIATIONS:

1. Instead of holding the cards in their hands, players may find it easier to lay them on the table face up.
2. If playing with the cards face up on the table, on their next turn, partners can look to see if a pair has been missed by their partner. If it has, they can steal the pair. For example, Player One missed a pair of 3's. When it is Player Two's turn, they can take the pair of 3's from their partner to add to their pile.

NUMBER FACE OFF

LEVEL: Pre-Kindergarten - Grade 1

SKILLS: count using one-to-one correspondence, identify objects in a group as $>$ $<$ or $=$ to

PLAYERS: 2 1 vs 1

EQUIPMENT: deck of cards (Ace=1)-5 to start or (Ace=1)-10, (remove Jokers, Jacks, Queens and Kings)

GOAL: to have the greatest number and to collect the most cards by the end of the game

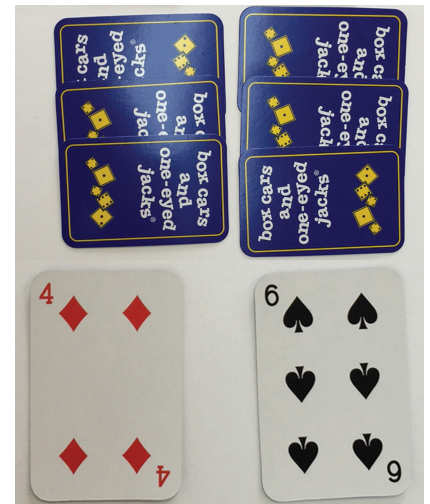
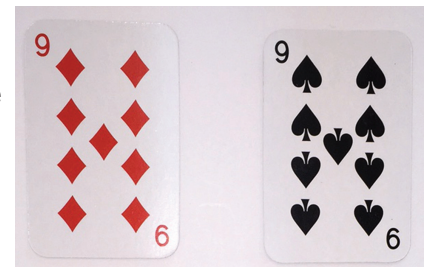
GETTING STARTED:

Players divide cards evenly between themselves. Each player turns over one card, counts and says the number out loud. The player with the greater number wins both cards. In the event of a tie, where each player has the same number, players declare a "Face Off".

Each player deals out three cards upside down and turns over one new card.

"TIE-BREAK"

The new cards are compared for greatest.
The greater number collects all the cards.
Player Two would say "6 is greater than 4"
and put all ten cards into their points pile.
Play continues for a set period of time. The player with the most cards is the winner.



MATH TALK

Make sure students are using correct math vocabulary as they play, for example "6 is a greater number than 4". As they mature they can verbalize part-whole relationships such as "6 is greater than 4 ... by 2".

VARIATION:

1. Play for least number as the winner of the cards, verbalizing "4 is less than 6" before putting cards into the point pile.

NUMBER FACE OFF GAMEBOARD

	MY NUMBER	<, =, >	MY PARTNER'S NUMBER
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

The highest number I had was

----- .

The lowest number I had was

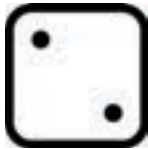
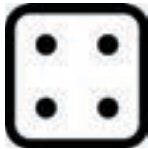
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I won _____ rounds.

1-6 SQUARE OFF GAMEBOARD

1					
	TOTAL		TOTAL		TOTAL
2					
	TOTAL		TOTAL		TOTAL
3					
	TOTAL		TOTAL		TOTAL
4					
	TOTAL		TOTAL		TOTAL
5					
	TOTAL		TOTAL		TOTAL
6					
	TOTAL		TOTAL		TOTAL

1-6 SQUARE OFF GRAPH

20 UP

LEVEL: Kindergarten - Grade 1

SKILLS: count using one-to-one correspondence 1-20, recognizing same/different, collecting, organizing and interpreting bar/pie graphs

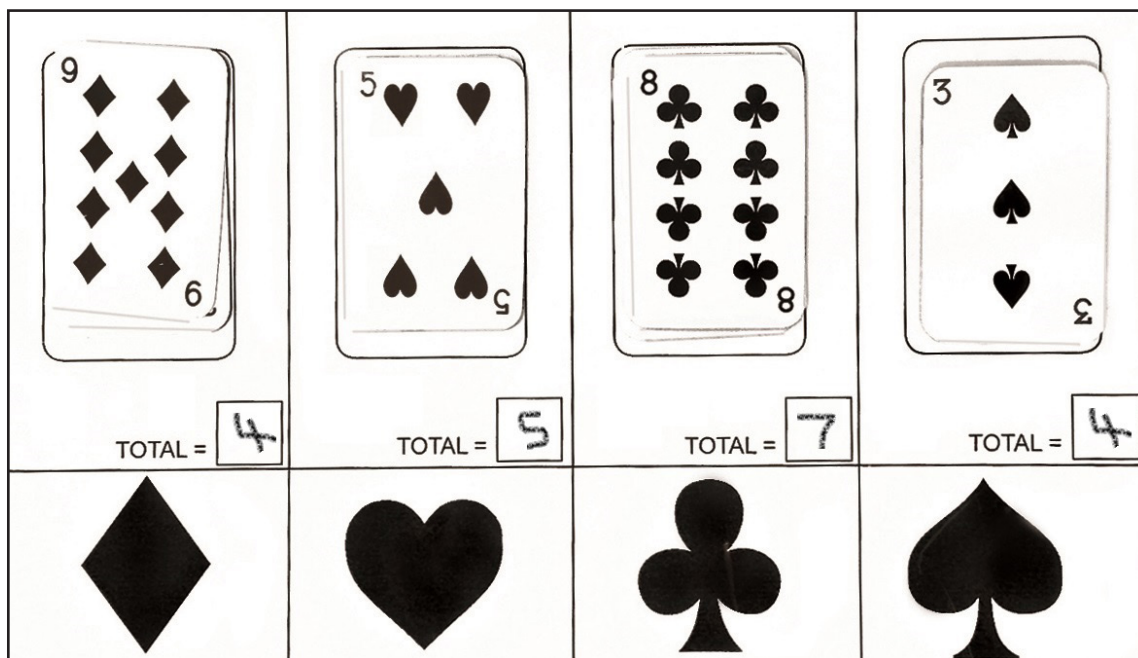
PLAYERS: whole group teacher led activity, each player with own cards and graph, or play with partner

EQUIPMENT: full deck of cards (Jokers removed), gameboard

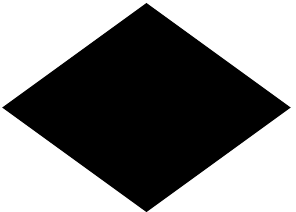
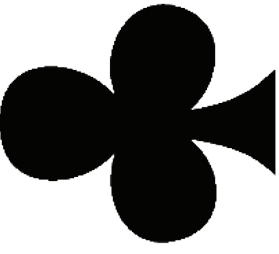
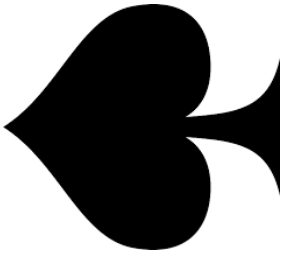
GOAL: to graph the suits of 20 cards

GETTING STARTED:

Each player takes twenty cards off the top of their deck. Have all students sort out their cards on their 20-Up gameboard.



20 UP GAMEBOARD

			
TOTAL =	TOTAL =	TOTAL =	TOTAL =

MATH SHAKERS



SUBITIZING SHAKE UP

LEVEL: Kindergarten - Grade 1

SKILL: subitizing, recognition of numbers 1 - 6

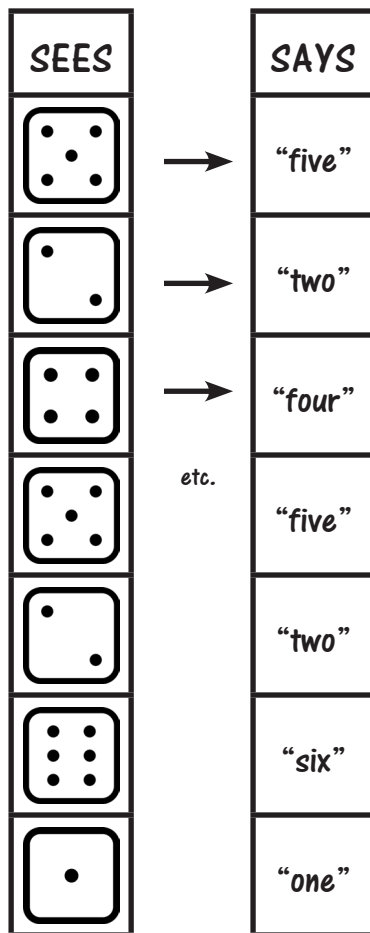
SET UP: vertical or horizontal, 1 die in each slot, 1 shaker per student

PLAYERS: 2 (cooperative pair) or solitaire

GOAL: call out numbers with immediate recognition of dot pattern

GETTING STARTED:

FOR SOLITAIRE: Have student shake their container, hold it still, then say their numbers out loud to their partners as they work down the slots.



As students mature they could record their numbers after each shake. (see reproducibles)

EXAMPLE:

See	Say	Record
	"two"	2
	"three"	3
	"one"	1



ORDER IT UP RECORDING SHEET

EXAMPLE:

MY SHAKE						
4	1	2	2	3	5	2

ORDERED UP						
1	2	2	2	3	4	5

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

ORDER IT UP RECORDING SHEET

EXAMPLE:

MY SHAKE						
4	1	2	2	3	5	2

ORDERED UP						
1	2	2	2	3	4	5

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

MY SHAKE						

ORDERED UP						

SHAKE IT UP MATCH IT UP RECORDING SHEET

I had matches. I had total dice matched.

I had matches. I had total dice matched.

I had matches. I had total dice matched.

I had matches. I had total dice matched.

												one	two	three	four	five	six	seven	eight	nine	ten	eleven	twelve
												1	2	3	4	5	6	7	8	9	10	11	12
												•	• •	• • •	• • • •	• • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •