

Wild & Wacky Workstations for K-2 Classrooms

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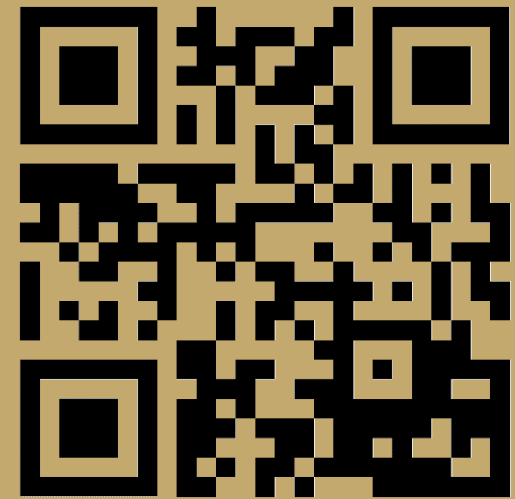
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<http://bit.ly/1ONH8jo>

Goals of Session

- Provide workstation ideas and activities for place value, number operations, and algebraic reasoning that can easily be incorporated into classrooms
- Meet the needs of ALL students while incorporating higher level thinking skills, problem solving, student accountability, and fun!

That's True About Me!

- I flew to Nashville!
- I'm a 1st Grade teacher!
- I enjoyed live music last night!
- I'm a Pre-K/Kindergarten teacher!
- I'm a football fan!
- I'm a 2nd Grade teacher!
- This is my first NCTM conference!
- I'm an instructional coach or specialist!

Research States Games...

- Provide rich contexts for mathematical learning and thinking (Fosnot, 2001)
- Explore certain mathematical ideas (Fosnot, 2001)
- Help students use strategies to construct an understanding of numbers
- Learn to apply computational skills to problem-solving situations (Burns, 2007)

Research States Practice...

- Provides opportunities to develop conceptual ideas and more elaborate and useful connections
- Provides opportunities to develop alternative and flexible strategies
- Provides greater chance for ALL students to understand
- Sends the message that math is about figuring things out and making sense

Van de Walle, 2006

Manipulatives & Handout

- Bottle Caps
- Deck of Cards
- Dice
- Egg Cartons

Bottle Caps

- Matching
- Know My Number



Addition in Reverse

Players	Materials	Directions	Variations
1 or more	• 2 sets of bottle caps labeled 0-9	• Draw a digit. • Use this number as the sum in a number sentence and find all the combinations of numbers that make up the drawn number.	• Use two digits to make the sum.

Know My Number

Know My Number

My Number is _____ Is it odd or even? _____

1 More	1 Less	10 More	10 Less	100 More	100 Less

Word Form			Expanded Form
Hundreds	Tens	Ones	Picture Form

Ways to Make with Addition	Ways to Make with Subtraction
With Tally Marks	Skip Count to Me
Greater Than and Less Than	Free Spot
On a Number Line	

Players	Materials
1	1 set of bottle caps labeled with digits 1-9
Variations	
?	

Deck of Cards

- 15
- Salute



15

Players	Materials	Directions	Variations
2 to 4	•2 decks of cards per pair of players	<ul style="list-style-type: none">•Players take turns to show their 3 cards and add the value of the cards.•If the total is 15, the player can keep their cards. If it is not 15 the cards are returned to the dealer and shuffled into the deck for the next round.•Play continues for a set time. The winner is the player with the most cards when play finishes.	?

Salute

Players	Materials	Directions	Variations
3	1 deck of cards (Jacks represent 11, Queens represent 12, Kings represent 13, and Aces represent 14)	<ul style="list-style-type: none">• Two players will face each other and the cards are dealt evenly to them. The third person will sit where they can see the other two players.• The third player will say "Salute" and the two players will turn over the top card, holding it to their forehead so the other person can see.• The third player announces the sum and the other two players try to be the first one to guess their own number.• The winner takes both cards. Players will rotate positions so everyone plays every position.	<ul style="list-style-type: none">• Students can write their own word problem using a set of numbers from the game. These could be put in another workstation for students to solve or be used as a warm up.• Change operation to multiplication, subtraction, or division.

Dice

- Create a Problem
- Roll & Make



Create a Problem

_____ □ _____ . _____

UPS	
1) Question	
2) Understand	3) Plan
4) Solve	5) Check

Players	Materials
1	Decahedron dice
Directions	
<ul style="list-style-type: none"> Roll to make 2 or 3 digit number. Use the digits and one symbol to create a number sentence and word problem. 	
Variations	
?	

Roll & Make

Roll & Make

My Number	In Picture Form
In Word Form	In Expanded Form
With Money	Represent It a Different Way
Make a Comparison Statement with a Number Greater than Your Number	Make a Comparison Statement with a Number Less than Your Number
Show Your Number as a Number Bond	
Show Your Number on a Number Line	
Show Your Number as a Strip Diagram	

Players	Materials
1 to 4	6 Ones (0-9) Place Value Dice or regular dice
Directions	
<ul style="list-style-type: none"> • Roll to make 2 or 3 digit number. • Use the digits and one symbol to create a number sentence and word problem. 	
Variations	
?	

Egg Cartons

- Number Shake
- Shake & Subtract



Number Shake

Players	Materials	Directions	Variations
1	<ul style="list-style-type: none">• Number Generator (Spinner, Digit Cards, Die, etc.)• 6 dimple Egg Carton• Token (Chip, Bean, Counter, etc.)	<ul style="list-style-type: none">• Label each dimple with the words: word, picture, ten frame, number line, number bond, and tally marks.• Students generate number using the number generator.• Place the token in the egg carton and shake to determine the representation that will be used.• Continue shaking until the number has been shown with all the representations OR• Generate a new number and make one representation.	<ul style="list-style-type: none">• Place three tokens in the egg carton to randomly select three multiple representations at one time.• After generating a representation for 3 to 4 numbers, have students order and/or compare using the representations.• Make two or three digit numbers.• Draw representations on index cards to make Memory, Matching, or Concentration game.

Shake & Subtract

Players	Materials	Directions	Variations
1	<ul style="list-style-type: none">•Egg carton•Pencil•Paper	<ul style="list-style-type: none">•Place 3 coins labeled with a "10", "100" and "1,000" (one each in the egg carton).•Shake carton, open, and record the number. Repeat, and subtract the digits.	<ul style="list-style-type: none">•Change the place value to two places.

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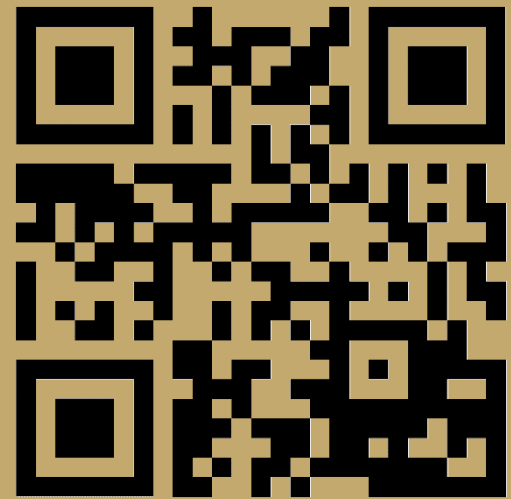
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References

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- Fosnot, Catherine Twomey, and Maarten Ludovicus Antonius Marie Dolk. *Young Mathematicians at Work: Constructing Number Sense, Addition, and Subtraction*. Portsmouth: Heinemann, 2001. 37-38. Print.
- Walle, John A., LouAnn H. Lovin, Karen S. Karp, and Jennifer M. Bay-Williams. *Teaching Student-centered Mathematics: Developmentally Appropriate Instruction for Grades Pre-K-2*. Second ed. Vol. One. Boston: Pearson Education, 2006. 2. Print.