Booth # \_\_\_\_\_

# Multiplication Makeover

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**Multiplication & More** 

## (Math Made Easy Night) CAMT 2014

- A. Concepts: Marilyn Burns is the Queen! The Math Solution
  - 1. Chopstick Problem
  - 2. Children's Line-up
  - 3. Circles & Stars
  - 4. Visual Multiplication with Rectangles
  - 5. Visual Multiplication with Base Ten Blocks
  - 6. Things That Come in Groups
  - 7. Generate Problems Concepts to Applications
- B. Master Multiplication Facts in 10 & 10! 10 min. & 10 days!
  - 1. 0's, 1's, 2's, 5's, 10's, & 9's
  - 2. Hard 15 Made Easy!
  - 3. 11's & 12's
  - 4. Short Consistent Review Square Scramble
  - 5. Missing Factor Bingo (Introduction to Division)
- C. Mathematical Patterns That Work
  - 1. 6-10 Hand Jive
  - 2. Check with a Big X.
  - 3. Legal Cheat Sheet
- D. Going Beyond Lessons
  - 1. Individual Multiplication Projects
  - 2. Multiplication Number Sense Tricks

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S
-
C
<b>D</b>
0
3
-
7
P
3

Any  $\# \times 0 = 0$ Any  $\# \times 1 =$  The other number. Any  $\# \times 2 = I$  can count by 2's. Any  $\# \times 5 = I$  can count by 5's. Any  $\# \times 10 = I$  can count by 10's.

Any  $\# \times 9 = I'II$  use my Trick of 9's.

NOW THERE

ARE ONLY 15 MORE! LET'S LEARN THEM

NOW!

	s,0	1's	2's	3's	4's	5'S	6's	7'S	s,8	9's	10's
s,0	0×0=	1×0=	2×0=	3×0=	4×0=	5×0=	6x0=	7×0=	8×0=	9×0=	10×0=
1's	0×1=	1×1=	2×1=	3×1=	=1×1	=1×5	=1×9	=1×2	=1×8	=1×6	10×1=
2′s	0×2=	1×2=	2×2=	3×2=	4×2=	5×2=	6×2=	<b>7</b> ×2=	8×2=	9×2=	10×2=
3′s	0×3=	1×3=	2×3=	3×3=	4×3=	5×3=	6×3=	7×3=	8×3=	9×3=	10×3=
4's	0×4=	1×4=	2×4=	3×4=	4×4=	5×4=	6×4=	7×4=	8×4=	9×4=	10×4=
5'S	0×5=	1×5=	2×5=	3×5=	4×5=	5×5=	6×5=	7×5=	8×5=	9×5=	10×5=
6's	0×6=	1×6=	2×6=	3×6=	4×6=	5×6=	6×6=	7×6=	8×6=	9×6=	10×6=
<b>7</b> ′s	0×7=	1×7=	2×7=	3×7=	4×7=	5×7=	6x7=	7×7=	8×7=	9×7=	10×7=
8′s	0×8=	1×8=	2×8=	3x8=	4×8=	5×8=	6x8=	7×8=	8x8=	9×8=	10×8=
s,6	0×9=	1×9=	2×9=	3×9=	4×9=	5×9=	6×9=	7×9=	8×9=	9×9=	10×9=
10's	0×10=	1×10=	2×10=	3×10=	4×10=	5×10=	6×10=	7×10=	8×10=	9×10=	10×10=

Mastering Multiplication Facts in 10 and 10

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Things
That
Come in
Groups

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6
7
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9
10
12



Select an Advanced Multiplication Project to complete independently. Be prepared to present to the class.

- A. Write and illustrate word problems using these guidelines. Each one should be on a single sheet of 8.5x11 paper.
  - 1. One step multiplication problem.
  - 2. Two step problem using multiplication only.
  - 3. Two step problem including multiplication and addition.
  - 4. Two step problem including multiplication and subtraction.
  - 5. Two step problem including multiplication and division.
  - 6. Two step problem including multiplication and measurement or geometry.
- B. List five different ways / situations when you would use multiplication in real life. Illustrate.
- C. Find the surface area of a Kleenex Box. Draw and label your findings. You may Google "Surface Area."
- D. Make a Multiplication Game for the class to play.
- E. Fill in blanks. Use a calculator to check. Show work. I am \_\_\_\_\_ years old. I am \_\_\_\_\_ months old. I am \_\_\_\_\_ days old. I am \_\_\_\_\_ hours old. I am \_\_\_\_\_ minutes old.

Nam	e		
	Sandra Sar	2	
	Enjoy some of my favorite Multiplication Numbe	er Se	nse Tricks!
	Teach your favorite "Math-In-Your-Head-Tricks"	to y	our class.
А.	Two Digits × 101	Ex:	35 × 101 = 3535
	Write digits down twice		$46 \times 101 = 4646$
			/8 × 101 =
В.	Two Digit Squares Ending in 25.	Ex:	15 × 15 = <u>225</u>
	1. Write 25.		$25 \times 25 = 625$
	2. Write fells digit < 1 larger. (Say "HTAM" like Shazam to remind you to work		$35 \times 35 = 1225$ $45 \times 45 =$
	backwards, from right to left.)		55 × 55 =
	Ex: Write 25 first: then Multiply tens digit × one larger.		65 × 65 =
			75 × 75 =
			85 × 85 = 95 × 95 =
C.	Two Digits × 11	Ex:	$45 \times 11 = 495$
	1. Write ones digit.		$34 \times 11 = 374$
	Regroup when necessary.		$89 \times 11 = 979$
	3. Write tens digit.		72 × 11 =
			53 × 11 =
			88 × 11 =
			97 ^ 11
D.	Three digits × 11.	Ex:	452 × 11 = <u>4972</u>
	1. Write ones digit.		$541 \times 11 = 5951$
	<ol> <li>Write sum of tens and hundreds digits.</li> <li>Write sum of tens and hundreds digits.</li> </ol>		$623 \times 11 = 0459$
	4. Write hundreds digit.		752 × 11 =
			482 × 11 =
E.	Two Digits × 2 Digits	Ex:	13 × 24 = 312
	1. Write product of ones digits.		$74 \times 52 = 3848$
	2. Multiply outside numbers.		$81 \times 96 = 7776$
	Write sum of two products		$41 \times 35 = \_$ 92 x 36 =
	3. Write product of tens digits.		47 × 12 =
			85 × 53 =
* T	u halding your corrulragroup numbers on your fingers. Only write ensures. No extre mark	•	62 × 19 =

\* Try holding your carry/regroup numbers on your fingers. Only write answers. No extra marks. Mastering Multiplication Facts in 10 and 10 © 2008 Lone Star Learning, Ltd.

#### Missing Factor Bingo - Student Come Board 4 2 10 1 8

- 1. Randomly number your Bingo Cards using the numbers 1 10 across the top and down the side of your card. That assures every card will be different.
- 2. Your teacher will draw a product from a container. For example, she might say, "The Product is 6." Find the factors of 6 on the top and side of your Bingo Card. Move your fingers until they intersect and write the product 6 in that square.
- 6 may be written in four places: 1×6=6 6×1=6 2×3=6 3×2=6 See example 3. To win the game, you must have correct answers in all ten like items.
  - Example: You are a winner with 10 stars or 10 apples or 10 cups or 10 turtles, etc.



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8

5

3 6

6

6

6

#### Missing Factor Bingo - Teacher Page

After successfully completing <u>Mastering Multiplication in 10 and 10</u>, your students will love playing MISSING FACTOR BINGO. It is a fantastic introduction/preparation for division and a great resource for those Hard-To-Teach-Days like Halloween.

I	2	3	4	5	<u>6</u>	7
8	٩	10	12	14	15	<u> </u>
<u> </u>	20	21	24	25	27	28
30	32	35	36	40	42	45
48	49	50	54	56	60	63
64	70	72	80	<u>81</u>	90	100

- Make a copy, cut squares apart and place in container. Draw and call out one product at a time.
  - Students will mark the number (product) on the Bingo Card everywhere two factors meet.

 Examples:
 Mark
 24 in 4 squares.
 6×4=24
 4×6= 24
 3×8=24
 8×3=24

 Imay only be in 1 square:
 1×1=1

 Imay be written 3 times:
 1×9=9
 9×1=9
 3×3=9

 The product
 H3 can only be written 1 time:
 7×7=49

**10 is written 4 times**: 5×8=40 8×5=40 10×4=40 4×10=40

Teachers may want to write the products on the board as they are called out and beside each product list how many squares will be filled in.

ANSWERS
1=1×1
<b>2</b> =1×2, 2×1
<b>3</b> =1×3, 3×1
<b>4</b> =4×1, 1×4, 2×2
<b>5</b> =1×5, 5×1
<b>6</b> =1×6, 6×1, 2×3, 3×2
<b>7</b> =1×7, 7×1
<b>8</b> =1×8, 8×1, 2×4, 4×2
<b>9</b> =1×9, 9×1, 3×3
<b>10</b> =1×10, 10×1, 2×5, 5×2
<b>12</b> =2×6, 6×2, 3×4, 4×3
<b>14</b> =2×7, 7×2
<b>15</b> =3×5, 5×3
<b>16</b> =2×8, 8×2, 4×4
<b>18</b> =2×9, 9×2, 3×6, 6×3
<b>20</b> =2×10, 10×2, 4×5, 5×4
<b>21</b> =3×7, 7×3
<b>24</b> =3×8, 8×3, 4×6, 6×4
<b>25</b> =5×5
<b>27</b> =3×9, 9×3
<b>28</b> =4×7, 7×4
<b>30</b> =3×10, 10×3, 5×6, 6×5
<b>32</b> =4×8, 8×4
<b>35</b> =5×7, 7×5
<b>36</b> =6×6, 4×9, 9×4







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1 inch grid