



Musical Math: Movement and Manipulatives

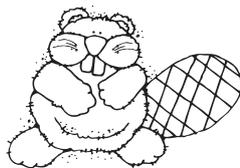
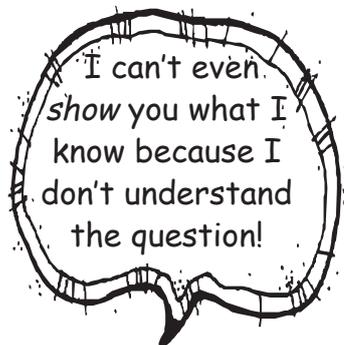


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The Musical Math CD was born of a need to help children learn and remember the vocabulary associated with math concepts.

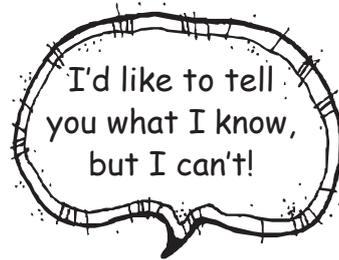
Receptive Vocabulary

Some children cannot answer questions because they do not "own" the vocabulary of the question. It is not a part of their receptive vocabulary.

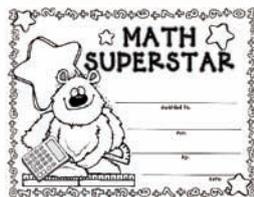


Expressive Vocabulary

Some children are unable to tell you what they know due to a lack of academic vocabulary. They don't "own" those words enough to be able to use them as a part of their expressive vocabulary.



- * The songs are designed to solve these problems by teaching mathematics vocabulary explicitly and practicing it in a fun and engaging way.
- * The movements are designed to demand a kinesthetic response to keep children focused.
- * The games and activities are designed to help children develop a true understanding of each concept.



Lesson plan rule of thumb: Dittos Don't Grow Dendrites!

Remember the Chinese Proverb: "I hear and I forget.
I see and I remember. I do and I understand."

Recommended lesson plan:

1. Introduce a concept by demonstrating it whole group with manipulatives.
2. Teach the song whole group to reinforce the vocabulary.
3. Practice the concept in small groups so that children can get hands-on experience with the concept. Have children verbalize what they are doing as often as possible.
4. Review and sing the song often to get it into long term memory.
5. If the children forget, give them a clue by humming the tune of the concept.

I Can Sort

I can sort, I can sort!
I can sort, sort, sort,
I can put 'em into groups
And I can sort, sort, sort!
I can sort by color, I can sort by size,
I can sort by shape- any old time!
I can sort, I can sort!
I can sort, sort, sort,
I can put 'em into groups
And I can sort, sort, sort!

More

More means a lot! More means a lot!
More candy, more cookies,
Give me all you've got!
More means a lot! More, more, more!

Less

Less is just a little- little, little, little!
Less is just a little, bitty, bit!
Like zero, or one, or two, that's it!
Less is just a little, bitty, bit!

Equal

(My Bonnie Lies Over the Ocean)
Equal, equal,
Oh, equal is always the same, the same!
Equal, equal,
Oh, equal is always the same!

AB Pattern

I can make a pattern- an AB pattern!
An AB pattern, with just two things!
A, B, A, B, A, B, A, B!
Red, green, red, green, red, green, red, green!
I can make a pattern, an AB pattern!

An AB pattern, with just two things!

ABC Pattern

The ABC pattern - It always has three!
It goes A-B-C, A-B-C, 1-2-3, 1-2-3!
ABC pattern, it always has three!

AAB Pattern

The AAB pattern, AAB goes
Legs, legs, knees! Legs, legs, knees!
Red, red, green! Red, red, green!
Red, red, green! Red, red, green!
Chug, chug, caboose! Chug, chug, caboose!
Chug, chug, caboose! Chug, chug, caboose!
Duck, duck, goose! Duck, duck, goose!
Duck, duck, goose! Duck, duck, goose!

What Comes Next?

(Three Blind Mice)

What comes next? What comes next?
Just do your best! Just do your best!
It's 19 and 20, 29 and 30,
39 and 40 is what comes next.
What comes next?
Just do your best! Just do your best!
It's 49 and 50, 59 and 60,
69 and 70 is what comes next.
What comes next?
Just do your best! Just do your best!
It's 79 and 80, 89 and 90,
99, 100 is what comes next!

Penny

A froggy found a penny, said, "M-hm! M-hm!"
It's brownish and it's worth one cent!
He found the penny by accident, M-hm! M-hm!

Nickel

Oh, the man with the pony tail is on the nickel,
And it's worth five cents!
Oh, the man with the pony tail is on the nickel,
And it's worth five cents!
Nickel, nickel, nickel!
And it's worth five cents!

Dime

(If You're Happy and You Know It)
Oh, the little coin's a dime, it's a dime!
Ten cents!
Oh, the little coin's a dime, it's a dime!
Ten cents!
I remember every time,
Ten pennies make a dime!
It's a dime, it's a dime, it's a dime!
Ten cents!

Quarter

(The Tango)

Twenty-five cents.
A great big quarter!
Twenty-five cents.
A great big quarter!
Twenty-five cents-
I want a quarter NOW!
To buy some bubble gum. Yum, yum!

Estimate

(Pizza Hut Round)

- Estimate! Estimate!
- I take my best guess and then I estimate!
- Estimate! Estimate!
- I take my best guess and then I estimate!
- You're close, but I'm closer!
- I take my best guess and then I estimate!
- You're close, but I'm closer!
- I take my best guess and then I estimate!

Count by Tens

(Band Warm-Up)

- 10, 20, 30, 40, 50, 60, 70, 80,
- 90, 100, Count by tens!
- 10, 20, 30, 40, 50, 60, 70, 80,
- 90, 100, Count by tens!

Count by Two's

- Count by Two's to 20!
- 20, 20! Hop like a bunny!
- Two, four, six, eight, ten, 12,
- 14, 16, 18, 20, 20! Hop like a bunny!
- (repeat)

Count by Five's

(Baseball Game "Charge!" Song)

- Count by fives! Count by fives!
- Five, ten,
- 15, 20, 25, 30, 35, 40, 45, 50,
- 55, 60, 65, 70, 75, 80, 85, 90,
- 95, 100! Charge!

Sphere

- Bouncy, bouncy ball,
- It's a sphere, it's a sphere.
- Bouncy, bouncy ball,
- It's a sphere, sphere, sphere! (repeat)

Cube

(Ain't Gonna Rain No More)

- My little block is a cube, a cube,
- And I know just what to do!
- My little block is a cube, a cube,
- Gonna build a house for you!

Cone

(When I Was Single)

- A cone's a triangle treat!
- A cone's a triangle treat!
- Oh, the edges are round,
- And it points to the ground,
- Like an ice cream cone you can eat!
- Yum!

Addition

(La Cucaracha)

- Add-d-d-dition! Add-d-d-dition!
- Put 'em all together now!
- Add-d-d-dition! Add-d-d-dition!
- Put 'em all together now!

Add-d-d-dition! Add-d-d-dition!

Put 'em all together now!

Add-d-d-dition! Add-d-d-dition!

Put 'em all together now! Cha, cha, cha!

Addition Doubles

(Army Chant)

- Clap your hands and touch your shoe!
(echo)
One plus one equals two! (echo)
Slap your knees and pat the floor!
(Continue with echoes after each line)
Two plus two equals four!
Sound off! (One, Two!)
Sound off! (Three Four!)
Sound off, sound off!
One, two- three four!

2. Punch and punch and do some kicks!

Three plus three equals six!

Run to school, don't be late!

Four plus four equals eight!

Sound off..... etc.

3. Time for recess once again!

Five plus five equals ten!

Don't you tattle, don't you tell!

Six plus six equals twelve!

Five Plus Two

(Mambo Italiano)

- Five plus two. That equals number seven,
- Five plus two. That equals number seven,
- Five plus two. That equals number seven,
- Five plus two is seven socks!

Two Plus Three

(La Malagueña)

- Two plus three, two plus three,
- That equals number five.
- Two plus three, two plus three,
- That equals number five.
- Two plus three, two plus three,
- That equals number five.
- Five, five, five, five! Olé!

Two Plus Four

Come on, baby, do the twist!

Two plus four equals six!

Come on, baby, do the twist!

Two plus four equals six! Da, na, na, na!

Three Plus Four

Three plus four is seven!

Three plus four is seven! (repeat)

Five Plus Three

Five plus three is eight!

Five plus three is eight!

(repeat and FREEZE!)

Six Plus Three

(Similar to The Macarena)

A six plus a three is a number, number nine!

A six plus a three is a number, number nine!

A six plus a three is a number, number nine!

Hey, number nine. Whew!

Six Plus Four

(Go Big Red)

Six plus four equals ten.

Six plus four equals ten.

Six plus four equals number ten.

Do it again!

Anything Plus Zero

(Dunderbeck's Machine)

Oh, anything plus zero

Is the same thing that you had.

Just cover up the zero,

You don't even have to add!

'Cause two plus zero is two!

And three plus zero is three!

Just cover up the zero,

Write the number that you see!

Mix It Up

Two plus one, one plus two,

The answer is the same

No matter what you do!

Mix it up! Mix it up!

Mix it up, mix it up, mix it up!

Subtraction

You can do subtraction!

You can do subtraction!

Take it, take it, take it, take it- Take it away.

Take it, take it, take it, take it- Take it away.

Subtract! Take away! Count it up. Go play!

Subtract! Take away! Count it up. Go play!

1-100

1, 2, 3, 4, 5, 6, 7; 8, 9, 10, 11, 12,

13, 14, 15, 16, 17, 18, 19, 20!

21, 22, 23, 24.... etc.

Teaching Ideas for the Concepts in Musical Math

Counting

Get a Zero the Hero puppet, and on every tenth day of school bring the puppet out for a visit. Have the children count aloud, and have the puppet pop up each time they come to a multiple of ten.

Hundreds Chart Activities

Call out numbers one at a time and have children color them the numbers that you say. An interactive hundreds chart is available online at:
<http://www.apples4theteacher.com/math/games/100-number-chart-one.html>.

Patterning:

String beads or other manipulatives on a string and have the children copy them, then identify the pattern. See if they can make the same pattern with a different manipulative.

Patterns with modeling clay:

Make patterns with modeling clay by giving the children pea-sized balls of different colored clay. They place the balls in a line on a strip of paper to form a pattern. Then flatten the clay on to the paper and scratch a design into it with a pencil.

Comparing Sets: (More, Less, and Equal)

After teaching the songs, have the children answer these questions:

"What does "more" mean? (A lot.) "What does "less" mean? (A little.)" "What does "equal" mean? (The same.) Make sure the children can answer these questions before attempting to test them on comparing sets.

The More, Less, and Equal Game

Have the children take turns rolling a die. Each child takes the number of counters that comes up on their roll of the die. When everyone at the table has had a chance to roll, then spin the spinner to see if more, less, or equal is the winner. The winner of each round gets all of the counters at the table. The spinner is printable off of the Musical Math Resource CD.

The Cup Game

Preparation: Get ten the paper cups and place them upside down. Number them 1-10 with a magic marker. Place the cups upside down on a table in order.

To Play: Have the children hide their eyes. Put a small toy under one of the cups while they are not looking. Have a child choose a cup to lift, looking for the toy hidden below. He must first identify the number of the cup. Give hints to help the children find the correct cup.

Coin Recognition

The Coin Trading Game- (Available on the Musical Math Resource CD)

Tip: Make your own die with only 1's, 2's, and 3's on it by writing the numbers on a blank wooden cube. This will make the game last longer.

To Play: Each child in turn rolls a die and takes that number of pennies. When a child acquires five pennies, he may exchange them for a nickel. When he acquires two nickels, he may exchange them for a dime. The first child to acquire two dimes and a nickel may exchange them for a quarter, and is the winner of the game.

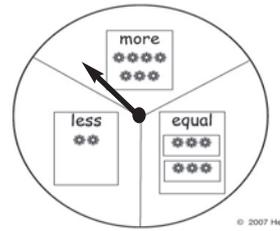
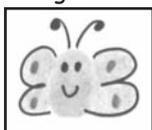
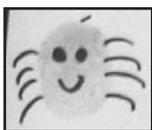
Variations: We play this game earlier in the year with nickels and pennies only, and later add in dimes. (Alternate versions are also on the Math Resource CD.) By May in kindergarten, the children can successfully play this game with all four coins.

Volume Shapes:

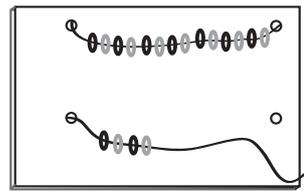
Have the children graph their favorite shape of candy by tasting. Try Whoppers for spheres, caramel squares for cubes, and chocolate kisses. This graph is included on the Math Resource CD, but was very easy to make.

Addition:

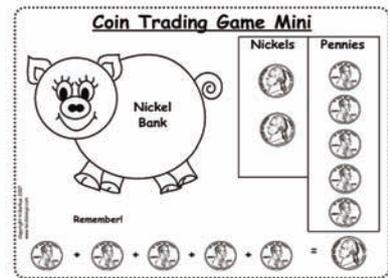
Make an Addition Song Book



More, Less, and Equal Spinner

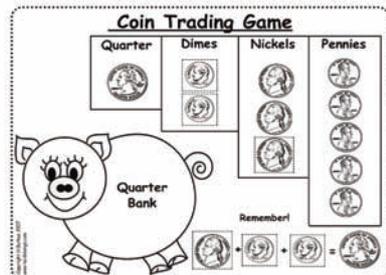


Patterning Gadget



Easiest Version (uses nickels and pennies only)

Medium Version (Uses pennies, nickels, and coins)



Hardest Version (uses all coins)



Have the children illustrate each addition problem by making pictures of common objects. Try using thumbprint pictures, such as those found in Ed Emberly books. Make the pictures into an addition book with the lyrics to each song as the words on each page. Masters and pictures for this book are available on the Math Resource CD



"Fuzzy Wuzzy" Addition Game

Note: This game plays like BlackJack or 21 but with the goal being sums of seven rather than 21.

Fuzzy Wuzzy's are wild. Put dots on the cards to help kids add up the numbers in their heads.

Act Out the Equation

Have one child roll a die. Have that many children come up and stand on one side together. Roll a die again. Have that many people join them on the other side.

Make Equation Pictures

Have each child roll a die and make a picture to go with it. For example, if he rolls a 3 and a 1, then he could make a picture of three flowers together and one flower next to them. Then write $3 + 1 = 4$ and illustrate it.

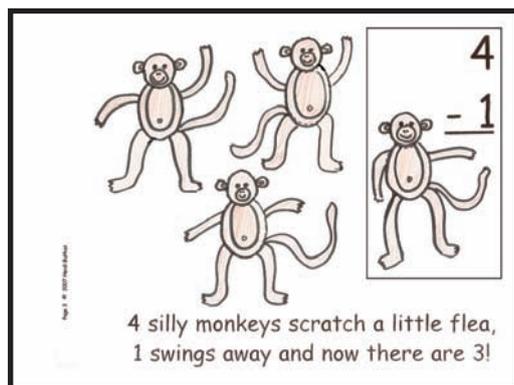
Sort the Dominoes by the Total

Have the children add up the dots and sort dominoes by the total number of dots

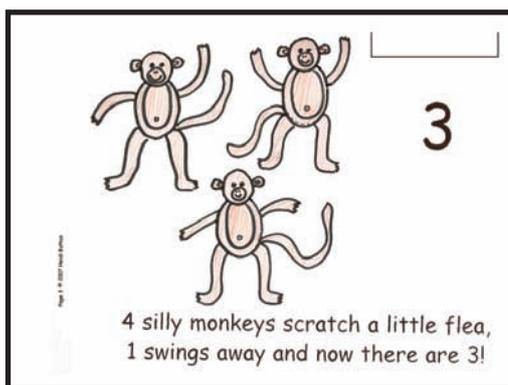
Subtraction:

Make a lift the flap subtraction book. In this book, the equation is written on the flap, along with illustrations of the subtrahend (the second number in the addition problem. When the flap is lifted, we see the answer to the problem and an illustration of the remainder. The masters and photos of each page of the Subtraction Book are available on the Math Resource CD.

Example of Page with Flap Open:



Example of Page with Flap Closed:



Use food to teach subtraction. In a small group, roll a die. Everyone gets that number of pieces of cereal. Then roll a die and have everyone eat that number of pieces and count the ones that are left. This works great, since there is no chance of counting the ones that have been taken away! Have the children practice writing that equation (or watch while you write it) before going on to another problem.

Tip: You will need two dice; one with larger numbers and one with smaller numbers. You can make your own by writing with a permanent marker on a blank wooden cube, or simply cover the numbers on a die with a sticker. Make sure your dice are two different colors.

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List of Related Citations

Musical Math, Movement, and Manipulatives

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