

Science is FUNdamental PreK

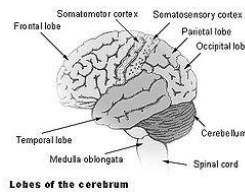
Maryann "Mar." Harman
BA Music Ed/Masters Education
Founder Music with Mar.®

Vestibular system must be activated to learn

Music uses more regions of the brain than any other activity. It only makes sense to use music to aid in memory/retention of important facts and concepts.

This can be done through activities that include:

- *Music (songs, rhythm activities); or
- *Movement (dance, drama, game).



There are five strands of science:

Physical Science
Life Science
Earth Science
Inquiry Science
Personal / Social Science

The Jungle (More Music with Mar./Bk + 4) different habitats; rain forest; animals

- *Use of sequenced dance steps aids in math skills
- *Beats in sets (patterns)
- *Can have children bring in animals from the jungle.
- *Ask them to move around like that animal.
- *At the end, tell them to freeze until you can guess what they are.
- *This gets them quiet at the end of a very, movement-oriented activity.

BRAIN FACT

Music creates a positive state for learning because it helps to reduce stress levels, heighten attention, enhance concentration, reinforce memory and stimulate motivation. (Campbell, 1997; Jensen, 2000)

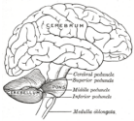
Prek is time to awaken the little scientist - Provoke curiosity!



We're Balls of Energy (Songs at My Fingertips)

- *We are all made of energy.
- *Our brains are electrical. They run on water and oxygen.
- *gets children up and moving and then slows them back down.
- *Teaches control of energy level and volume of voice.
- *Bouncing - reinforces steady beat needed for reading proficiency
- *Spinning - strengthens the vestibular system
- *Swaying - works on balancing
- *Sequences forward and then backward

The words are: Energy, Energy. We're balls of energy. (loud and then soft)



BRAIN FACT

Moving activates muscle memory, which is helpful for students who can only learn by moving. (Hannaford, 2005)

Lady Bug Rap (Songs At My Fingertips)

- *Bugs have antennae
- *Prediction "Yes. There's five!"

Mr. Froggy's Family (Mr. Froggy's Family/Bk + 4)

- *Metamorphosis
- *Family values; Role model for boys
- *Children sing "Ribbit, ribbit. Croak, croak, croak"
- *Move hands from side to side; up and down - cross-lateral movement
- *During instrumental, have children sit like a frog.
 - *reinforce spatial awareness
 - *works on gross motor skills.

Caterpillar (More Music with Mar./Bk + 4) metamorphosis

- *Can have children bring in socks (remind parents to Wash Them First!)
- *On one side, put wings and antennae; on the other lets.
- *Have children pull sock off into reverse position to show the change from caterpillar to butterfly
- *Use of drama for better comprehension

The Blending Song (Songs for a Great Day!/Bk + 4)

1. Calypso dancing
2. Science/Art - blending of colors
 - a. can make color wheels or use overhead projector
 - b. can have cooking project - make instant pudding with food coloring
3. By putting colors together in first verse as "Red + Yellow = Orange" and in second verse "For orange, mix yellow + _____", wires brain for math (turnaround facts)



I Know a Smart Woman (Hear Me Sing; Watch Me Dance/School Specialty)

- *Uses tune of "I Know An Old Lady Who Swallowed a Fly"
- * Takes a different twist as the 'smart woman' eats from her food groups.
- *Have a food pyramid up front with the children each receiving a food.
 - ^ When their food is sung, they come up and place it on pyramid.
- *Everyone joins in on "She's a healthy woman!"

Extensions:

- Graphing and Sorting
- Personal preferences
- Multicultural - different families eat different ways

Dance For the Food Groups (A Musical MARathon)

- *Review food groups
- *Each group has its own dance
- *Children hear all groups and then must remember from sound and do dance

Tell Me The Word (Mr. Froggy's Friends' ABCs / Sky Glove)

- *Children hear rhyme. Makes brain have pattern to follow for answer
- *Must identify things in the sky

What's Up in the Sky? (Start Each Day / Sky Glove)

- *Knowledge of what is in sky
- *Basic vocabulary
- *Have children discuss what else is in sky

Roy G Biv (Music Makes It Memorable)

- *Acronyms have long been a great memorization tool.
- *The name Roy G Biv is made from first letters of the colors in the rainbow.

Four Seasons (Start Each Day with a Song)

- *Awareness that seasons change and what they are

Scales, Feathers or Fur (A Musical MARathon)

- *Children hear different animals sing and guess what group

Habitat Scat (Music Makes it Memorable)

- *Scatting is a style used in Jazz; Scatting plays with syllables and sounds
 - ^good for language; drills on rhyming
 - ^It's silly

Have pictures of Habitats up front

Have children put animal into its proper habitat

The Jungle (More Music with Mar./Bk + 4) *different habitats; rain forest; animals*

- *Use of sequenced dance steps aids in math skills; beats in sets (patterns)
- *Can have children bring in animals from the jungle.
- *Ask them to move around like that animal.
- *At the end, tell them to freeze until you can guess what they are.
- *This gets them quiet at the end of a very, movement-oriented activity.
- *Can make paper plate or paper bag animals

Can buy plates that have animal faces.

Peanut Butter (Hear Me Sing)

Peanut. Peanut butter (full voice) And, jelly (whisper voices)

First you take the peanuts and you crack 'em. Then you squash them. (Peanut etc)

Then you find some grapes and you pick 'em. Then you smash them. (Peanut etc)

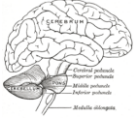
Then you get some bread and you spread 'em. Then you bite it.

(Sing again but as if mouth was full.)

- *Allows children to play with voices
- *Teaches where peanut butter and jelly come from
- *Shows process of the making the sandwich
- *Vocal chord exercise back and forth between whisper and sing

I'm a'lookin' (Bk + 4)

- *Call and response teaches taking turns / listening / waiting
- *Endangered Species
- *Children learning to take responsibility; awareness they can do something



BRAIN FACT

Although test scores of use of music and no music may exhibit equal results, when memory of knowledge is compared later on, the students who learned through music and movement had better retention. (Altenmuller et al 1999).

Who's in the Barnyard? (Mr. Froggy's Friends' ABCs/Barn Glove)

- *Use glove to bring animals out as children identify them
- *Give sound of animal as clue; children feel successful

What Animal's Missing?

- *Sequencing
- *What is missing from sequence?

Visuals and labeling are excellent for children learning a new language.



Some Animals (Celebrate Science - School Specialty)

- *Identifies different animal characteristics
- *Children can add their own

Autumn Leaves Oom Pah Pah (Singing in a Different Key)

- *Children are introduced to a $\frac{3}{4}$ meter. Important for internal rhythm
- *May use version for 5 or 10 leaves
- *Have children act out song
- *Shows season and what happens to leaves; role of wind

Directions (Musical MARathon)

- *Learn North, South, East and West by moving
- *Learn in-betweens - NW, NE, SW, SE
- *Can use mats or draw on floor

Green, Yellow, Red (Mr. Froggy's Friends' ABCs)

- *Understand rules for motor vehicles
- *Move body to understand word meaning

LIST OF RELATED CITATIONS

"Science is FUNdamental"

Presented by Staff Development for Educators (SDE)

Maryann Harman MA< ED

Black, S. (1997). "The Musical Mind". The American School Board Journal. January.

Brewer, Chris (1995) "Music and Learning: Seven Ways to Use Music in the Classroom". Kalispell, MT. LifeSounds.

Campbell, D & Brewer, C (1991). "Rhythms of Learning." Tuscon, AZ. Zephyr Press.

DePorter, B; Reardon, M; Singer-Nourie, S. (1999). "Quantum Teaching. Orchestrating Student Success". Boston, MA. Allyn & Bacon.

Diamond, M & Hopson, J (1998) "Magic Trees of the Mind", New York, NY Penguin Press

The Dana Foundation "Brain in the News" Washington, DC. Monthly publication or visit website www.dana.org

Hannaford, C. (2005). "Smart Moves: Why Learning is Not All in the Head". Arlington, VA. Second Edition. Great Oceans Publishing.

Jensen, E. (2000). "Music with the Brain in Mind". San Diego, CA. The Brain Store, Inc.

Jensen, E (2005). "Teaching with the Brain in Mind". ASCD. Washington, DC

Ratey, John J. (2008). "Spark". New York, NY. Hachette Book Groups USA

Schiller, P. (1999). "Start Smart". Beltsville, MD. Gryphon House.