

Music And Early Learning



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The guide

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Magna Systems Catalog and ISBN Numbers

Magna Systems Catalog Number MG-2003-07

VHS ISBN 1-55740-850-5

DVD ISBN 1-55740-846-7

Close-Captioning

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SUMMARY

From the time they are born, human beings are predisposed to learn and enjoy music. Children especially are open to it, and research increasingly has shown that exposure to music and especially participation in making it – by singing and playing simple percussion instruments – is invaluable in helping children’s brains develop the “neural bridges” that make them stronger. When music accompanies the acquisition of other skills, it enhances the act of learning. *Music and Early Learning* explains why this is so, and how experienced kindergarten and preschool teachers use music to help children grow and learn.

Scientists have defined seven kinds of intelligence:

1. linguistic
2. logical-mathematical
3. spatial
4. bodily-kinesthetic
5. musical
6. interpersonal
7. intrapersonal

Early encouragement and development of these types of intelligence will play a significant role in a child’s life as he or she grows into an adult. Research has shown that nurturing musical intelligence by using music as a tool for teaching greatly enhances the development of all of the other types of intelligence. It also boosts the ability of children to learn other skills. Even more importantly, it makes learning more fun by letting children experience the joy and delight that music brings.

Explore:

- How research has shown that all children have musical aptitude, that it’s highest right after birth, and that it needs stimulation.
- How there is a “window of opportunity” between birth and age nine when musical aptitude is most readily enhanced.
- How children’s brains are not fully developed when they’re born, and need to build “neural bridges” to mature – and how music helps build more of these “neural bridges,” producing greater intellectual ability and spatial skills.
- How learning that involves both the left and right sides of the brain is more effective.
- How an intellectual exercise such as learning the alphabet is accomplished more easily and effectively when set to music.
- Why children are not ready for logical and symbolic learning at an early age, but learn best in ways that involve the whole body.
- Why bonding between the teacher and child is so important, and how music can contribute to this relationship.
- How playing simple instruments like drums, jingles, rhythm sticks or rattles gives kids an opportunity to explore the connection between sounds and their ability to produce them.

OVERVIEW

INTRODUCTION

Children love music. They're born loving it. As mothers have always known and researchers are now verifying, babies respond to music even while still in the womb. **Human beings are predisposed to learn and love music**, just as they are predisposed to learn and love language. Indeed, the two go together. When children learn the alphabet with the help of a simple melody, they remember the letters much more easily than they do without the help of that melody.

This is something that mothers and teachers have known forever, but now scientific research is beginning to show us why it happens. Language and music activate different areas of the brain. When two or more areas are stimulated simultaneously, learning is greatly enhanced. As more and more parents and educators acknowledge, music is a vital and invaluable element in the nurturing of children's developing brains.

One reason that music helps a child learn better is because **rhythm underlies language**. Have you ever tried to remember a name without success, and recalled the rhythm of the word to bring the name to mind? Children do this too, without even realizing it.

And **music makes connections across both hemispheres of the brain** – the right-hand, creative side and the left-hand, logical language side – in a way that no other activity can.

As soon as they enter the world, children are primed to enjoy and learn music, just as they are primed to learn language. **All babies in all cultures respond to simple melodies and rhythms**. And they all have musical aptitude. In fact, the ability to learn is highest right after birth, but it must be stimulated if it is to remain high. The earlier a child is exposed to music, the greater the potential for learning. Studies have shown there is a distinct **window of opportunity between birth and age nine** when parents and teachers can most enhance music aptitude. As we all have noticed, children who grow up in musical families tend to be more musical in later life than those who aren't exposed to music as children. Science seems to be telling us that in this case at least, it's nurture over nature.

HIGH AFFECT

Those who don't play an instrument but would like to incorporate music into their classroom should use their voice. A voice may be made more powerful by use of **high affect**. Do this by:

- Exaggerating your facial expressions.
- Exaggerating your voice, making it very warm and cheerful.
- If you're singing, for example, Barney's "I Love You," make it very loving, make it very warm and really belt it out.

By doing this, you'll make yourself feel warm and happy – and because you feel this way, the children will also feel this way, on a visceral level.

Exaggerating emotion by making your actions, and the meanings behind them, very clear helps children learn in three ways:

- It helps them with rhythm,
- it stimulates chemicals in their brain, and
- it helps them to speak and to understand speech.

Music affects the part of the brain that has to do with emotions, and that's what **affect** is all about. By using high affect and warm affect, you reach a part of the brain that you don't normally reach when you're teaching things that have to be analyzed. Arithmetic, or colors, are items dealt with by the analytical part of the brain. But music relies on emotions among a group – in this case, the children who are singing, and the teacher who sings to them. That emotional part of the brain connects naturally to many other parts of the brain.

Young children are intensely attuned to vocal tones and inflections. Speech is an emotional experience to them. They hear the emotional content of someone's voice before they register the intellectual content.

There's a reason that people speak "motherese" to a baby. It's time-tested and evolutionarily proven to promote speech and communication.

And fathers don't talk with their low voices to a baby; they too speak with soft, higher voices, gentler voices, to a baby. And a baby responds to that tone.

It seems there is a deep-seated need for parents to give, and babies to hear, a "cooche-cooche-cooing" noise. All people in all cultures perform such gentle sing-song sound ritual with their babies, no matter how isolated their societies may be.

What is true of voices is also true of music. If you're going to sing to a baby to lull him to sleep, you're going to sing with a gentle voice, a quiet, hushed voice, to make baby feel sleepy and relaxed. And of course this tactic works no matter how old most of us get! A nice, calm voice has a soothing effect on the body's nervous system.

Lullabies are universal. Mothers, fathers, caregivers sing to children in all cultures. It's not unreasonable to say that children come out of the womb craving music. Some studies which seem to indicate that mothers who play Mozart for their children in utero are more likely to see their children be musically inclined– and, some argue, also more intelligent.

MUSIC AND THE BRAIN

It's often commented that children's brains are like sponges, soaking up everything they come in contact with. Actually, **a better analogy for the brain would be a three-dimensional, connect-the-dots puzzle.** As researchers have demonstrated, the dots are neurons, and in children they are waiting to be connected by new pathways of information called **neural bridges.** The more the brain is stimulated, the more neural bridges are formed, and the stronger the child's intellect becomes.

One study of three-year-olds who participated in either daily adult-led singing time or weekly keyboard lessons showed that, in eight months' time, their spatial skills increased by 46%. A similar group of

three-year-olds who didn't receive music training saw their spatial skills increase by a mere 6%. These spatial skills are essential building blocks for later success in such subjects as physics and calculus.

Music has an amazing ability to build capabilities that are used in other activities. **The songs, movement and musical games of children are, in the words of nationally recognized neuroscience educator Dr. Dee Joy Coulter, "brilliant neurological exercises"** that introduce children to sensory motor skills, speech patterns and vital movement strategies. In a world where children's attention is so easily grabbed by television and other passive entertainments, it's crucial that they be exposed to active music making throughout childhood.

LEARNING MODALITIES

When we speak of a person's **intelligence**, we are usually referring to his or her linguistic intelligence. Or we may mean his or her facility with words, or logical-mathematical intelligence (the ability to think scientifically or mathematically). When we think of smart people, we tend to think of scientists or mathematicians or neurosurgeons. **But as researcher Howard Gardner discovered in a landmark study, there are at least seven kinds of intelligence**, or as he puts it, "ways of knowing the world." Each is distinctive, but all seven combine in every person to create a **"profile of intelligence."**

In addition to our language and our logical-mathematical abilities, we all have a certain amount of what Gardner calls spatial intelligence. Those who have it in abundance become race-car drivers or pilots, chess players or architects. We also have kinesthetic, or bodily, intelligence, which is the ability to use the body in a variety of situations. Dancers, athletes and surgeons all have highly developed bodily-kinesthetic intelligence. We have as well a certain amount of interpersonal intelligence, or the ability to understand and empathize with others. And we have intrapersonal intelligence, which is self-awareness, the ability to know how we feel and to have insights into why we act as we do.

Finally, Gardner postulated a seventh intelligence that we all possess to varying degrees: musical intelligence. Some of us are born with more of it than others, but all children have the potential to develop their musical intelligence greatly, if they're given the right stimulation.

Children don't all learn in the same way. One might consider a kindergarten as one would a garden, or a forest. Different trees have different needs. There's a fir tree, an oak tree, a cactus — each type has certain characteristics, and requires a certain kind of nurturing. And yet, even within each type, each plant is itself individual and unique. Equally, some children may learn best in one way, others in another, yet ultimately they are all individuals.

One of Gardner's most profound insights was that **children learn best when learning involves more than one of these intelligences.** An exercise or game that combines word play, singing and movement, for example, will be far more effective than one that focuses on words alone.

And it is important that teachers and parents understand that **kids don't all learn in the same way.** For example, a child with a learning disability may be frustrated and confused when faced with a "typical" teaching style involving book-reading, listening to a teacher, and doing as told. It's important to present many different types of styles, particularly when working in an environment with many different kinds of kids — which most, if not all, classrooms are. Music is a method which can bring all kinds of children together, including those who aren't very comfortable verbally or socially. Teachers have found that

when children “come to circle” to sing, they all join in. Later on the playground, children can be heard singing the classroom songs on their own. The songs touched them; they have learned.

AUDITORY LEARNERS

Children with a strong musical intelligence tend to be **auditory learners**: they learn best through hearing something spoken or sung.

Perhaps the oddest thing about this fact is this: **the Western-style school system is built upon the visual, and yet only about 2% of people in our culture are naturally visual learners.** We tend to become visual learners as we grow, but only because we're forced into it. It's all the schools offer, and children adapt to this method so they might progress through the system as they're expected to do. But for most of us, that's simply not the best way to learn. It's inefficient at best, and entirely ineffective at worst.

Most very young children learn primarily through their bodies, using their bodily-kinesthetic intelligence. Learning to crawl, to pick up objects, to walk – these are fundamental steps in every person's intellectual development. When this movement is combined with music and other learning modalities, tremendous learning takes place. When children sing and dance, they are exercising their musical, linguistic, bodily and spatial intelligences all at once. And by doing it together, as a group, they are bonding with each other and with their teacher, stimulating their interpersonal intelligence.

Adding a **kinesthetic** part to a musical piece helps children learn. Take, for example, a song about a slug: “Roots, Stems, Leaves, Flowers, Fruits and Seeds, the six parts of a plant we eat.” A kinesthetic component is added through the creation of a dance to go with the song: the children “become” a root, a stem, a leaf, a flower, a fruit, and finally a seed. As they go through the motions of the dance in conjunction with the singing of the song, the underlying meaning sinks in. They will remember what a slug eats, by remembering their song and dance.

Teachers can use several tactics to enhance the power of music:

- Sit on the floor, or a small chair – that is, sit as the children do. This gives you eye-level contact with them and strengthens the group's bond.
- Begin with the same song every time. This sets the mood and readies the children for singing.
- Consider beginning with a “name” song, such as “The More We Get Together”, that allows the group to review everyone else's names.
- Make the second song something easy, something that everyone can sing without difficulty. “Twinkle Twinkle Little Star” may be, for instance, a better choice than the vocally rigorous “The Star-Spangled Banner”.
- Ask for and take requests.
- Bring in an instrument. Show children how you play it, and let them try. Drums are fun. Items such as flutes or whistles can't be easily shared for reasons of hygiene, but they can be demonstrated, and group activities can revolve around the music made by the teacher. For example, a scale going up means everyone stand! – and a scale going down means everyone can sit. It becomes a listening game.

MUSIC FOR MUSIC'S SAKE

Music is its own reward. Yes, it's an invaluable tool for helping children learn language and number skills. But that's not the most important reason for bringing it into the classroom. The most important reason is because music is an essential art. It's an endless source of joy and inspiration.

It's all too easy to forget that we're working with a whole different part of the body, a whole different part of the brain, when we're singing than we are when we're teaching a lesson about the alphabet or the numbers or the colors. Yet we can teach numbers with the "Green and Speckled Frog" song; we can teach subtraction with "The Monkeys on the Bed".

When you give children the opportunity to participate in their learning through music, they embrace that act of learning. Say one child in the singing circle has a wonderful aptitude for math. That's the child that's going to ask for the "Monkeys" song over and over again. He knows the answers even before the teacher says what's going to happen. How many monkeys are there on the bed now? Two! This child knows when to yell out the answer, he loves that feeling of knowing there are only two monkeys. And the same song might affect another child in a completely different way: she may one day become a zoologist because she's so fascinated by the monkeys in the song. Songs touch children – and adults – in all kinds of different and unexpected ways.

QUESTIONS/ACTIVITIES FOR DISCUSSION

1. In the program, you hear that human beings are predisposed from birth to enjoy music. Do you agree with this assessment?
2. What is your earliest memory of music? Is it pleasant? Is the music in the memory something someone close to you created – for example, your mother singing a lullaby – or is it something you heard on the television, stereo or radio? Or is it the act of you yourself singing?
3. As a group, pick a song you might use in your classrooms. Go around the room and practice singing it with high affect. Which of your classmates' renditions are most powerful? Is it because they are funniest, friendliest, most cheerful?
4. What sorts of musically-based lesson plans do you think can be reasonably devised and practically carried out in today's modern classrooms, taking into consideration space and sound limitations in school buildings? What movements do you think could accompany such lesson plans? Would, or could, you let your students dance? If not, what sorts of movements could you lead them in as they sit in a circle or at their desks?
5. Share a song you know with the group. If it's a movement song, act out the movements. If it's a song without standard moves, make them up as you would if teaching the song to your own students.
6. Do you listen to music on your own time? Why?

ACTIVITY: SEVEN KINDS OF INTELLIGENCE

In pairs or small groups, describe and discuss the seven defined types of intelligence listed below. How can you as a teacher help your students develop each type? What sort of activities might enhance these various intelligences?

1. linguistic
2. logical-mathematical
3. spatial
4. bodily-kinesthetic
5. musical
6. interpersonal
7. intrapersonal

FOR MORE INFORMATION...

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Young, Susan and Joanna Glover. (1998). *Music in the Early Years*. Bristol, PA: Taylor & Francis, Inc.

LINKS

Early Childhood Music and Movement Association (ECMMA)	http://www.ecmma.org/
Early Learning: Songs, Stories, and Poems	http://www.netrox.net/~labush/colpres.htm#song
Head Start: Songs for Children	http://www.head-start.lane.or.us/education/activities/music/
Music Together	http://www.musictogether.com/
The National Association for Music Education	http://www.menc.org/information/prek12/echild.html
Professor Lamp: The Seven Types of Intelligence	http://www.professorlamp.com/ed/TAG/7_Intelligences.html
RITMiA	http://www.metodo-ritmia.com/home_ing.htm
Suzuki Association of the Americas	http://www.suzukiassociation.org/