

Making Connections with Music and Literacy

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Introduction: Audition and Audiation

Current brain research is helping us understand how children learn. Through imaging technologies that provide real-time pictures of brain activity, neuroscience allows us to see the effect that music has on the brain. We take in information through our senses –hearing, sight, touch, smell, and taste. An auditory sound triggers the learning process and lights up the brain. Our brain quickly helps us process and respond to these sounds. With exposure to musical sounds, we begin to differentiate between organized musical patterns and noise, high and low pitches, fast and slow tempos, and soft and loud tones. We can hear the varied timbres of musical instruments and recognize familiar sounds and voices. Intentional musical activities can help our children become more sensitive to sound and develop auditory discrimination between tones, textures, and patterns.

The Gordon Institute for Musical Learning (GIML) explains that children learn music in much the same way they learn a language. They go through stages of language babble just as they go through stages of music babble. Once they “break the code” of language, they begin to imitate words, speaking in sentences and phrases of their own. This process is similar with their exposure to music. As their auditory senses are awakened to the sounds of music, children begin to hear and imitate songs, rhythms, and musical phrases (GIML, 2008). Edwin E. Gordon is a well-known music education researcher who introduced the term “audiation” in his early research in the 1970s. Audiation is the cognitive process a musician goes through to hear and comprehend music, even when no sound is present (Gordon, 1971). We take in music through our auditory senses, but just hearing the music may not be enough to help develop our musical abilities.

The aural and oral processes that help us discriminate musical sound and develop musical sensitivity and skill are similar to those of language acquisition. Audition is defined as the power or sense of hearing or the perception of sound. Gordon explains that audition and audiation are two very different processes. He refers to the audiation of music as being similar to thinking in a language. Audiation requires that the listener understand the elements of music and be able to hear or predict the patterns, even if the music is unfamiliar. Audiation in music can be compared to thinking and finding meaning in speech and language. The listener (music or oral language) makes connections to prior experience, predicts what will come next, and interacts intellectually with the music. Gordon referred to audiation as “singing and moving in our minds without having to sing and move physically” (Gordon, 1997, pp. 5-6). The ability to audiate in music can be achieved through a combination of environmental experiences and training.

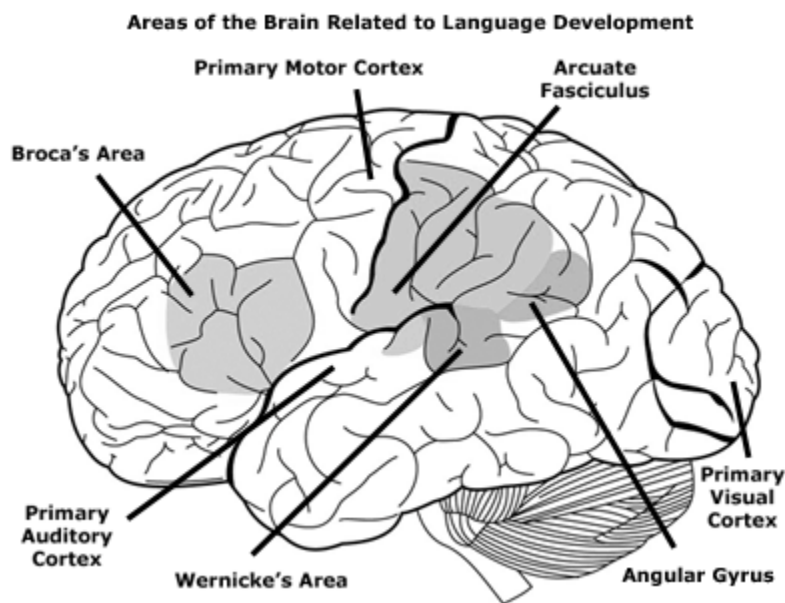
Language and Music

Recent language studies indicate that the same brain functions used in processing music are similar to those functions used in processing language. Patel (2008), discusses the similarities in cognitive processes between music and language as “two of the defining attributes of our species” in a Library of Congress podcast (November 8, 2008). In his article on language, music, syntax and the brain, he states that “language and music overlap in important ways in the brain, and thus studying the nature of this overlap can help illuminate interesting features about the functional and neural architecture of both domains” (Patel, 2003, p. 674). His research focuses on

similarities between the production of individual speech and musical sounds, melodic and rhythmic patterns, and syntactic processes in language and music. Research studies are currently being conducted on topics of neural plasticity, pitch perception, text and tune processing, and the “influence of experience or training in one domain on abilities in the other” (p. 679).

Brain research continues to inform our understanding of how the brain works. Earlier discussion on the brain focused on which hemisphere of the brain was dominant: the right or the left. In the past, language processing was considered a left brain function and music was once considered a right-brain “frill.” At this point, referring to people as either left-brained or right-brained is considered outdated. New research shows that trained musicians use more left-brain activity than previously thought. Researchers from Georgetown University Medical Center (2007) found that the brain processes music and language in similar ways. They explain that the temporal lobes help with memorization of information in both language (words and meaning) and music (familiar melodies). The frontal lobes help us “unconsciously learn and use the rules that underlie both language and music, such as the rules of syntax in sentences, and the rules of harmony in music” (Science Daily, 2007, para. 3).

#1: Illustration of the Brain



Jensen (2000) explains that music is processed differently for different people depending on the kind of music and their musical background. The brain also has sophisticated neural networks that process the elements of music. The frontal lobe (area around your forehead) is involved in purposeful acts: judgment, creativity, problem solving, and planning. The parietal lobe (top back area of the brain) processes higher sensory and language functions. The temporal lobe (left and right above ears) is responsible for hearing, memory, meaning, and language. The occipital lobe (back of the brain) is responsible for vision. Jensen explains that familiar music activates Broca's area in left hemisphere. Rhythm notes are activated in Broca's area and the cerebellum. Harmony activates the left side of the brain more than the right in the inferior temporal cortex. Timbre is the only musical element that activates the right hemisphere. Pitch activates an area on the left back of the brain called the precuneus. Melody activates both sides of the brain (Jensen, 2000).

The Dana Foundation publication, *Learning, Arts, and the Brain*, (2008) includes nine research articles written by cognitive neuroscientists to examine “causal relationships between arts training and the ability of the brain to learn in other cognitive domains” (p. v.). Three of these studies are specifically aimed at the study of reading and language development. Each of these studies use neuroimaging technology to examine brain activity in a controlled research setting. A Stanford University team of researchers determined that correlations did exist between the amount of musical training children received and the amount of improvement in their reading fluency (Wandell, et al. 2008). Petitto (2008) of the University of Toronto noted significant differences between performing arts students and non-performing arts students in abstract reasoning tasks.

University of Oregon neuroscientists focused on the effects of music training in a study of 88 Head Start children. Researchers tested six measures: language fundamentals, vocabulary, letter identification, IQ, visuospatial intelligence (or spatial cognition), and developmental numeracy. A music intervention included 40 minute daily activities involving listening to music, moving to music, making music, and singing. Results of this study, although limited by the small number of participants, suggest that the children in the music training group showed significant improvements in receptive and expressive language, letter identification, puzzle assembly, numeracy, quantitative reasoning, and critical thinking. Researchers state that “learning music requires focused attention, abstract, relational thinking, and fluid intelligence (called “executive control”) (Neville, et al., 2008, p. 106).

Auditory, Visual, and Kinesthetic Experiences Through Music

As a society, we are often bombarded with sound and we often tune it out. To help children develop discriminating auditory skills that will help them truly ‘hear music,’ we need to make a conscious effort to ‘make music.’ Research demonstrates that listening to music stimulates less of the brain than actively making or performing music. Rather than just listening to music in the background along with the competing sounds or noises in our overly stimulating environment, children who personally interact with music through playing instruments and singing songs use different parts of the brain. When we begin to perform or make music, the kinesthetic senses and motor responses are activated. Performing music makes neural connections between various parts of the brain (Jensen, 2000). Once we learn to read music, use our motor skills to play an instrument or sing, and refine our auditory senses so that we can hear subtleties and evaluate musical sounds, we can begin to understand how much of our brain is involved in this very complex musical activity.

Singing songs and recalling or reading lyrics activate language processing areas of the brain. When we play even the simplest of instruments, we are physically engaged in the process of using our gross and fine motor skills. Both rhythm and melody instruments require motor coordination. Auditory and motor activities take place through playing an instrument as we make connections between what we must do to make the sound we want to hear. When we dance or move to music, we are involving our bodies in musical expression. Dancing or moving to the rhythm of music stimulates the brain's motor areas. The visual senses are activated when we watch music being performed, examine how an instrument works, or look at musical symbols. Reading music involves visual activity that results in a motor, as well as a cognitive response. If we take our musical involvement to a higher level by learning to read musical notation, we go through the complex thought process of understanding that symbols represent the sound we hear.

Developing Musical Intelligence

As a result of brain research, the theory of the multiple intelligences continues to evolve and guide teachers as they individualize instruction to meet the diverse needs of their students. Gardner (1983) states that the musical intelligence emerges earlier than any of the other intelligences. He emphasizes that positive early childhood experiences, particularly those that explore the creative potential of music, are crucial to the development of the musical intelligence. The musical/rhythmic intelligence is recognized as an autonomous, separate intelligence. Despite the fact that national and state music standards have been in place for many years, many students are still not enjoying the benefits of a musical education. The teacher's role in fostering the development of the musical intelligence is significant. However, many schools do not have music specialists and must rely on teachers, parents, and community members for their children's music education.

Gardner (1983) provides a portrait of early musical competence. In infancy, normal children sing, babble, produce undulating patterns, and imitate tones sung by others. An important transition in their musical lives occurs in the middle of the second year of life when they begin to emit tones that explore small intervals from seconds to fourths. They begin to invent spontaneous songs and imitate short patterns from familiar songs. By age three or four, children begin to conform to cultural norms and expectations of what a song should be according to cultural practice. Creative improvisation is inhibited as children stop inventing original tunes and making exploratory sounds. By school age, children can produce a fairly accurate rendition of common melodies. The multiple intelligence theory values nurture as much as nature in the development of intelligences. Crystallizing experiences spark the musical intelligence, starting off the development of talents and abilities. These experiences may provide a turning point for the child. Paralyzing experiences shut down the musical intelligence, discouraging the development of talents and abilities. A child's musical growth is easily stunted when he/she is told to "stop that racket" as he/she practices an instrument.

Gardner (1983) claims that, for most children in our culture, there is little further musical development after the school years begin unless children exhibit unusual musical talent or have exceptional opportunities. Musical repertoire may expand, skill in performance may improve, and knowledge about music may increase, but creative development is minimal. Gardner states that this may be because "music occupies a relatively low niche in our culture, musical illiteracy is acceptable" (p. 109). Our society does not have high musical expectations for the average individual, in contrast to expectations for the mastery of verbal or mathematical skills. Music programs are often the first to go with budget crunches. The very students who could benefit from exposure to music are often attending schools that have eliminated music and the arts from their curriculum. This situation makes it all the more important that we find the connections between music and language arts, mathematics, science, social studies, physical education, and the visual arts.

Making Connections between Music and Literacy

As you plan to integrate music into your teaching of literacy, explore the similarities between language and music in your everyday classroom activities. The relationship between language and music has been recognized throughout history, particularly as words are expressed through melody and rhythm. Melody is built on the natural phrasing, rhythm, pitch, accent, syllabication, and rhyme of language. Much of the music we share with children is sung: vocal or choral music. The lyric of a song is poetry, using extensive rhyme, repetition, rhythm, melody, and

form. Rhyme, rhythm, and repetition can provide us with helpful tools for short and long term memorization. The rhythm, accents, and metric patterns of the words flow along above the steady beat.

The melody naturally flows up and down in pitch in imitation of speech and oral expression. The musical phrases follow the rules of oral conversation naturally punctuated with the rising tones of a question and the response of the answer ending with a period. The dynamics of sound relate to the volume of tones from soft to loud. Musical notation is symbolic, using notes, rests, and symbols that have meaning much like letters, words, and sentences in language. Music notation, like the written word or numeral, is a symbolic representation of sound in time. Written music reinforces the concepts of print with notes moving from left to right on the musical page along the musical timeline.

To understand how music can promote literacy, compare the components of oral language with the elements of music: beat, rhythm, meter, melody, pitch, tone color, dynamics, tempo, and form. Singing a lyric and chanting a nursery rhyme can help children develop phonemic awareness, as well as expand vocabulary. Singing furthers oral language communication skills and gives children the opportunity to express themselves both musically and linguistically. Musical activities can actively engage students in learning language and provide an opportunity for a stimulating social and expressive communication experience.

Music and Language Arts Standards

Many teachers feel that they can not teach music because they have no musical training. They do not feel they have the background or skills to be effective. If you feel this way, I encourage you to try to find just a few musical/literacy activities that you are comfortable with sharing with your students. The California content specifications for teachers in the visual and performing arts music domain indicate that all elementary school teachers should have a “basic fluency with the elements of music: pitch, rhythm, and timbre and music concepts, including music notation” (CSET, p. 16). The California Department of Education (CDE) Standards for Visual and Performing Arts (2001) strands include: artistic perception, creative expression, historical and cultural context, aesthetic valuing, and connections, relations, and applications. The first grade artistic perception standard requires students to read music notation and listen, analyze, and describe music in terms of rhythm, pitch, and simple musical forms. Grade two requires that students:

- Read, write, and perform simple rhythmic patterns, using eighth notes, quarter notes, half notes, and rests.
- Read, write, and perform simple patterns of pitch, using solfège.

Your first step in understanding the connections between music and literacy is to explore the basic components or building blocks of music: the musical elements. The music glossary from the CDE visual and performing arts standards provides the following useful definitions for typical music terminology.

The Elements of Music

- **Rhythm** - The combinations of long and short, even and uneven sounds that convey a sense of movement. The movement of sound through time. Concepts contributing to an understanding of rhythm are:

- regular vs. irregular
- strong vs. weak
- long vs. short,
- equal vs. unequal
- **Melody** - A logical succession of musical pitches arranged in a rhythmic pattern. An important part of melody is rhythm. The notes vary in pitch and duration. Form also applies to melody. Melodies include repetition as well as contrast. Pitch characteristics of melodies include:
 - Direction - up, down, stay the same
 - Range - wide or narrow spectrum of notes ranging from low to high
 - Position - Maybe use notes of high pitches or transposed to low pitches, but as long as the intervals between notes is consistent, the melody can be placed with the total pitch continuum.
 - Intervals - The distance between the pitches of the melody may be steps from one note to an adjacent note, or skips where pitches leap from one to another skipping a tone or tones.
- **Harmony** - The vertical blocks of different tones that sound simultaneously; a progression of chords.
 - Vertical structure - homophonic with chords connected to and supportive of the melody
 - Horizontal structure - polyphonic with chords created by simultaneously sound melodies.
- **Form** - The design of music, incorporating repetition, contrast, unity, and variety. The organization of music, its shape or structure.

The Expressive Elements of Music - Add variety and contrast to music

- **Timbre** - The distinctive quality of tone of a sound.
- **Dynamics** - The volume of sound; the loudness or softness of a musical passage.
- **Tempo** - The pace at which music moves, based on the speed of the underlying beat.

(California Department of Education Music Standards and Frameworks Glossary available at: <http://www.cde.ca.gov/be/st/SS/muglossary.asp>)

The Components of Literacy

Gaining an understanding of the elements of music contributes to greater sensitivity to the natural commonalities between music and language development. As children begin to play with sounds through babbling, chanting, singing, and imitating the sounds around them, they experiment with their own physical expressions of sound: tone, pitch, dynamics, rhythms, accents, syllabication, and rhymes. As children explore their own articulation of vowels and consonants, they begin to develop the necessary skills for auditory discrimination required for oral language proficiency. As an aural and oral art, music closely relates to auditory discrimination of oral language development and the development of aural listening skills.

The California English and Language Arts Standards and Frameworks at the kindergarten level focus on reading (learning letters, words, and sounds), reading comprehension (identifying identify the basic facts and ideas in what they have read, heard, or viewed), literary response (listen and respond to stories based on well-known characters, themes, plots, and settings), writing, written and oral conventions, and listening and speaking.

California Visual and Performing Arts Standards	California Language Arts Standards
<ul style="list-style-type: none"> • artistic perception (read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music) • creative expression (apply vocal and instrumental musical skills in performing a varied repertoire) • historical and cultural context (role of music in past and present cultures throughout the world) • aesthetic valuing (derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses) • connections, relations, and applications (competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills) 	<ul style="list-style-type: none"> • reading (learning letters, words, and sounds, patterns, phonics, rhymes, syllabication, vowels and consonants, concepts of print, phonemic awareness, etc.) • reading comprehension (identifying identify the basic facts and ideas in what they have read, heard, or viewed) • literary response (listen and respond to stories based on well-known characters, themes, plots, and settings) • writing (descriptive words, poems) • written and oral conventions • listening and speaking (listen critically and respond appropriately to oral communication using proper phrasing, pitch, and modulation)

Early literacy standards emphasize phonological awareness and oral language development. Oral language development involves learning expressive and receptive spoken language, including developing vocabulary. A song lyric can be useful in helping children learning language and vocabulary. Early literacy also involves developing alphabet knowledge and letter recognition. Many publishers focus on learning letters and letter sounds through music. These programs also develop the child's print awareness using musical cues. Developing phonological awareness can be accomplished using songs, finger plays, word games, nursery rhymes, and jump rope rhymes, can help children achieve phonological awareness.

Ten Classroom Connections for Music and Literacy

As you look for activities that enable you to teach literacy, as well as provide musical instruction, you may wish to start with some of the essential components of early literacy. I have provided a list of ten possible connections between music and literacy that you might make, even you do not have a musical background and training. I do encourage you to use the language and terminology related to the elements of music in your conversations with your students.

- Oral Language Development
- Developing Vocabulary
- Alphabetic Knowledge
- Phonological and Phonemic Awareness
- Concepts of Print

Oral Language Development and Developing Vocabulary

Connection #1: Share your favorite music with your students. Bring in your favorite musical CDs or your iPod. Play music (be sure to preview for appropriate content) during transitions, rest time, physical education, etc. Structure meaningful conversations with your students. What is it? Who is performing on what instruments? Is it sung or played? What are the lyrics expressing? Why do you like it? What elements of music are highlighted? How does this music make you feel? Why?

One of the biggest contributions you can make is to model your love of music – even if it is not “classical” or particularly sophisticated. Not including any music in your school day implies that you do not feel music is important. Start by thinking about the music you enjoy listening to and determine if that music is appropriate for children. How might you incorporate this music into your classroom? You might use the music for transitions as you move your children from one activity to another or you may be able find music or lyrics that you can incorporate into your curriculum and instruction. Can your children sing, dance, clap to the beat, use hand movements, do aerobic exercises, lip sync, rest, read, nap, or just plain have fun with your favorite music? Try bringing in a different style of music or encouraging your students or their parents to share their favorite artists. Remember to be careful about appropriate language, particularly if they bring in musical lyrics in another language. If you have a parent or community member who is a musician, invite them to demonstrate their instrument or perform for the class or school.

Your next step would be to use musical terminology: beat, rhythm, melody, harmony, tone color, pitch, dynamics, tempo. What is music? We hear music constantly, but a more careful analysis of the components of music can help you start conversations about music with your students. Discuss the tempo as you decide if this music is fast or slow, energetic or mellow. Are the dynamics loud or soft? Can you tap or move to the beat, clap the rhythm of a phrase, or sing along with the melody? Are there several different instruments playing at the same time to form harmony? Do you hear repeated patterns or entire sections of the music, suggesting a particular form? Can you hear the timbre or tone color of different instruments? Become familiar with the California Department of Education the visual and performing arts standards and frameworks. The music glossary includes definitions of the elements of music.

California Language Arts Standards

Examine the language arts standards to find relationships to the musical elements. Make intentional musical connections to California Language Arts standards. Find music that specifically builds vocabulary or relates to literature or tells a story. As you select songs for your children, make sure they are age-appropriate texts. Avoid songs with words they do not understand unless you can capitalize on this opportunity for a teachable moment. Always provide instruction and definition of the meaning of song lyrics. Use pictures or bring in props that help your students comprehend meaning. If you are singing “*This Land is your Land*,” have a map ready. Look for songs that relate to life experiences and challenges or retell a familiar story. Folks songs and songs from different cultures can be integrated into your social studies curriculum. Ask questions about the words and ideas in a song for clarification and understanding. Use songs that help students develop new vocabulary and understand complex concepts. Use songs with repetition to help with memorization. Songs and raps can serve as mnemonic devices to help children remember or recall information.

Listening and Speaking

- Students listen and respond to oral communication through song.
- Information and ideas are shared through music.
- Generally lyrics are coherent and presented in complete sentences.
- Songs describe people, places, things, locations, actions, etc.
- Children recite short poems, rhymes, and songs.
- Some songs tell stories in a logical sequence with verses relating events sequentially and choruses providing the repetition on the main theme between verses.

Literary Response and Analysis

- Students listen and respond to stories (or story songs) based on well-known characters, themes, plots, and settings.
- Use stories with music and character theme songs.
- Demonstrate how music enhances the story.
- Improvise sound effects and musical cues in a story or book.
- Listen for musical themes for characters. "Peter and the Wolf" is a good example of musical themes for each character.
- Discuss the mood of background music in movies, TV, cartoons, etc.

Narrative Analysis of Grade-Level-Appropriate Text

- Music, particularly folk music, can tell stories of real events and people.
- Lives of folk heroes and historic events can be learned through folk songs.
- Patriotic and holiday songs can enhance celebrations and provide children with textual information through songs and lyrics.
- Multicultural music gives children a better understanding of the diverse world around them.
- Music companies like Putumayo focus on music from around the world - <http://www.putumayo.com/>.

Alphabetic Knowledge

Connection #2: Find your favorite songs and raps that teach the letter symbols and sounds of the alphabet. Alphabet songs are wonderful tools for teaching children their alphabet sounds, letters, and symbols. I will refer to my own compositions here but you can find many different resources online and through a variety of music and literacy production companies. Jensen (2000) states that music can enhance memory by “increasing our attention to sounds, timing, perception, while embedding emotional content” (2000, p. 69). He says that retention and recall are dramatically improved when our brain’s attentional and memory systems are activated. Music can often grab the attention of children who are difficult to engage. Special needs students and English language learners often participate in group music activities enthusiastically. Music is called the universal language and many music activities can help children gain skills in English. See Soundpiper Music (<http://www.soundpiper.com>) for audio files and music downloads. An alphabet and counting CD originally designed as parent homework for a character education program is available at: <http://www.soundpiper.com/downloads.html>.

Phonological Awareness

Phonological awareness involves skills that directly relate to music, particularly through lyrics and text: rhyming, alliteration, syllabication, counting words, and onset/rime. Research includes studies of using music to assist learning and development, examining the use of music as a mnemonic device. Music can also elicit attention, motivation, and positive mood in the classroom.

Connection #3: Clap, tap, or play the rhythm of words, names, lyrics with rhythm instruments. Simple musical games can be used to focus on syllabication and rhythm. Clap the rhythm and count the syllables in your name. The rhythm of the music is directly related to the rhythm and natural accents in words and sentences. This is a great activity for a multicultural, multiethnic group of students. My Spanish speakers really enjoyed the fact that their names were often syncopated, making their name rhythmically exciting.

Connection #4: Rap nursery rhymes and poems. Children love to rap rhymes to an electronic drum beat and play rhythm echoes on rhythm instruments. Children can learn to hear the difference between a steady beat and the rhythms and syncopation of words. Musical lyrics are written as rhymes and the words of the lyric are separated into syllables according to the rhythm of the music. Songs for Teaching is a website full of excellent musical resources for teachers (<http://www.songsforteaching.com>). You can download songs and resources for phonological awareness, as well as resources for a variety of other literacy concepts and subject areas.

My students loved to rap to “The Name of the Game is What’s your Name?” I recorded this rap with my elementary school students and you can hear their performance at: <http://www.soundpiper.com/lyrics13.html>. Conduct a search for online drumbeats. One example is at: <http://www.onlinedrummer.com/beats.php>

“The name of the game is what’s my name. I’ll tell you mine and you do the same!”

You can also hear an example of these same children performing the “Mother Goose Rap” at: <http://www.soundpiper.com/lyrics10.html>

Alliteration is another phonological skill that can be strengthened through song and rap lyrics. The Zoo-phonics animals provide an excellent example: *Allie Alligator’s jaws are snappy, Bubba Bear is big and black*, etc. (<http://www.zoo-phonics.com>). The combination of alliteration and rhyming along with a steady drum beat is highly motivating for young children learning their letter names and sounds as they rap. nursery rhymes, fingerplays, and songs like *Peter, Peter, Pumpkin Eater, Baa Baa Black Sheep, Sing a Song of Sixpence*, and *Little Tommy Tucker*. Songs such as “*She sells sea shells down by the seashore*” provide an opportunity to teach alliteration.

Talk to your children about the sounds they are making as they sing or rap. Onset and rimes can be emphasized with musical texts and lyrics. Help children identify the onsets: all of the sounds of a word that come before the first vowel and rimes: the part of a syllable that includes its vowel and any consonant sounds that come after the vowel. Auditory discrimination can be developed with purposeful attention to the syllables and the pronunciation of vowels and consonants in a song lyric or rap text.

Singing, Speech, and Articulation

Connection #5: Sing with your children and purposefully emphasize proper vowel placement and enunciation of consonants in the song lyric. Singing with your students gives you a perfect opportunity to develop phonological and phonemic awareness. Singing requires you to pay close attention to the vowel and consonant sounds. To sing, you must breathe properly and sustain your breathing consistently through the musical phrase. Ask children to take a deep breath before singing a phrase and make sure all words are clearly enunciated in their performance. Breathing is an important process in singing. Controlling the flow of air throughout a sentence helps in public speaking. Practice giving each syllable an equal flow of air as you expend your breath as you interrupt the flow of air with the consonants.

Vowel sounds are important in singing so children must learn where each vowel is placed in the vocal cavity. Choral ensembles typically warm up with vocal exercises using pure vowel sounds - ee-eh-ah-oh-oo. Have your students warm up their voices with this set of vowels and try out different consonants - *mee-meh-mah-moh-moo* or *tee-teh-tah-toh-too*. As you use your lungs, lips, tongue, and throat to form those vowel sounds, you can feel the vibration of the tone in your mouth. Singers shape the vowels with their mouths and then allow the consonants to interrupt the flow of air throughout a musical phrase. Children will respond to these expectations for enunciation, if you remember to emphasize the importance of articulating their consonants and singing pure vowels.

Connection #6: My students love to sing and move to old 50s tunes. I find that 50s music is typically light-hearted, easy to sing, playful, rhythmic, and perfect for dancing and movement. *The Witch Doctor* by Ross Bagdasarian (1958), made popular by Alvin and the Chipmunks, is a good example. This song is wonderful for helping students place their vowel sounds and use their tongues and lips to articulate the lyric. Not only do we exaggerate the consonants as we sing the song, but I often have the children do what I call “silent singing.” We mouth the vowels and consonants and then arrive at the end of the chorus with a “bang!” This helps children with their audiation skills as they try to keep the beat in their heads and hear the melody of the chorus without singing the words out loud. I call it a facial workout for the lips and tongue.

Oo-ee oo-ah ah
Ting Tang Walla Walla Bing Bang
Oo-ee oo-ah ah
Ting Tang Walla Walla Bing Bang

Children frequently mumble and do not project their voice or articulate their pronunciation. As children sing, encourage them to exaggerate their enunciation. Make sure you can hear the beginning and ending consonants. I often demonstrate what I hear the children sing and they think it is funny when I leave off the final consonants. They often do not know that they are dropping off the ends of words. Help them distinguish the differences between similar consonants (t and d, m and n) and call attention to blends, diphthongs, and partners. Diphthongs are a challenge for singers, requiring that you emphasize the first vowel and move the second vowel at the end of the tone (“I” or “oh). Teach your children to be sensitive to how the words of the musical text require careful and thoughtful performance. Use a mirror to help children see what their mouth is doing as they sing. Identify sight words and focus on “not throwing away” any words (like the, an, and) as you practice singing a musical phrase.

Concepts About Print and Music Notation

A good way to learn more about the elements of music is to learn the symbolic system of musical notation. How do composers of music write down on paper what they hear or want the musician to play? Gardner (1983) stated that the musical intelligence qualifies as an independent and separate intelligence because music has a symbolic system in the form of music notation. He states that "symbol use has been key in the evolution of human nature, giving rise to myth, language, art, science: it has also been central in the highest creative achievements of human beings, all of which exploit the human symbolic faculty" (p. 25). He states that the 20th century philosophers focused on the "symbolic vehicles of thought. Thus, much of contemporary work in philosophy is directed toward an understanding of language, mathematics, visual arts, gestures, and other human symbols" (p. 25). Many teachers have not played an instrument or been taught to read musical notation. I have included some examples of simple notation activities for rhythm and melody.

Connection #7: Show children a song book and locate the words and syllables under the musical notes. You may not have learned how to read music, but you can still show how music is written and discuss how symbols can have meaning just as they do in literature. Find a book of music that you can share with children or locate music online. Locate the title, table of contents, name of author, and name of illustrator. Music is titled and written by a composer. Often music is written by the composer and the lyrics are written by a lyricist. Call attention to the difference between a book with music notation and a book with words only.

Children learn about concepts of print through books just as they can from written music books. Music is written on a staff that includes symbols for notes and rests. The music follows from left to right. The musical lyric is broken up into syllables under the notation, also moving left to right. Each note, rest, or sign is a symbol much like letters that make up words. Children might create their own symbols for sounds just as contemporary composers do as they create different graphic representations. Children enjoy drawing a melody in the air as they hear a song or symphony. It is not necessary to use traditional notation with young children. However, the concepts of high and low can be pictured graphically through visual art. They can also move their arms or bodies up and down as they recognize the differences in pitch from high to low.

Many computers have built-in music composition and recording programs. Music teachers frequently use MIDI (Musical Instrument Digital Interface) sequencers connected to the computer with sounds triggered from a digital keyboard. You can also download MIDI files from the computer. One of the most popular MIDI pages is posted by the National Institute of Environmental Health Sciences (NIEHS) available at: <http://kids.niehs.nih.gov/music.htm>. These files provide the lyric and a MIDI sound file. The Library of Congress performing arts website includes archives of sheet music from all eras: <http://www.loc.gov/performingarts/>. Often you can find period sheet music to represent different periods in history. The Library of Congress website includes archives of historical recordings as well.



Reading Music

Children can learn to read basic music notation. Teachers can also learn how to read music by becoming familiar with basic symbols of notation. I want to share two very simple ways you can teach very young children how to read music. When I was teaching in the elementary school, I made books on reading rhythms and rhythm echoes and reading melodies using colored bells. I had the books laminated and bound and still use these books in my music workshops. I recommend that you start your collection of instruments with a good rhythm band instrument set, as well as an inexpensive set of melody handbells. If you can afford it, I also recommend a Remo Indian gathering drum.

Whenever I talk about handing out instruments in a classroom, I see teachers panic because they are worried that the children's behavior might get out of hand. I introduce musical instruments (even if they are homemade) as the most precious tools a musician can have in their possession. They are for the purpose of making music, not noise. Anyone chosen to play these instruments must treat the instrument with the utmost respect and only play when the music indicates that it is time to play. The musical instruments in my classroom were not to be banged on randomly, but to be played with the sole purpose of making music.

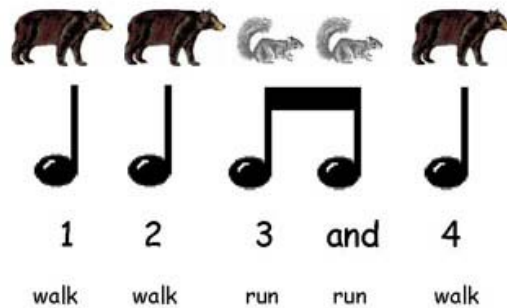
Playing musical instruments is an opportunity to teach the concept of artistic "discipline" as it relates to musical practice and performance. The word discipline is often associated with punishment, but I assure my young musicians they can not learn to play music without discipline, practice, and self control. Accepting the responsibility for the playing an instrument requires that the child show respect for the instrument. Students quickly learn that they must be focused on performing their duties as musicians if they expected to keep be able to play the instrument. Discipline in music requires motivation and the willingness to practice towards perfection. I rarely had problems with students since they knew the instrument would be passed on to another students who could demonstrate the discipline needed to play even the simplest of instruments.



Connection #9: Introduce your children to rhythm echoes. Download the PowerPoint of rhythm echoes under the music elements section from the Soundpiper website at: <http://www.soundpiper.com/activities2.html>. Right click on the link and "save target as" to download to your computer. You can then print out the slides, laminate, and bind your book of rhythm echoes. Below is the rhythm pyramid using different animals for each note value. The eagle glides as a whole note which gets four beats counts (glide 2-3-4). The penguin is the half note which slides, each note receiving two beats (slide – 2). The bear or quarter note walks one

beat at a time (walk walk walk walk). The squirrel is the eighth note, running in double time (run-run-run-run-run-run-run-run). I recommend ordering matching puppets from Puppet Universe so that one child can “conduct” the class and dramatize the rhythm by making their puppets glide, slide, walk, and run. BINGO is a great song for rhythm and I often ask children to raise their hands whenever they hear the “bingo” rhythm. A science connection that I make with the rhythm echoes is that we explore sound vibrations and the different timbre of rhythm instruments. I call out skins (drum heads), seeds (shakers), wood (woodblock and sticks), and metal (tambourine and triangle) as they echo the rhythms I play on the gathering drum.

Example of Rhythm Echo Screen:



You may want to download an online metronome (<http://www.metronomeonline.com/>) or locate electronic drum beats. Several metronomes are available on the web or you may be able to locate a manual metronome at a garage sale, which is where I found mine. A metronome can be set to play different tempos by selecting the number of beats per minute. This is another useful tool for audiation as children learn to keep a steady tempo in their minds. This also makes a great math connection as you count the number of beats per minute. I typically tell children to put the beat or the rhythm in their feet. Children march to a steady beat, experience changing tempos, and develop motor skills as they move to the rhythm of whole, half, quarter, and eighth notes. This makes a great connection with physical education.

Connection #10: Play color coded songs on the hand bells. This activity can be successful for very young children. The PowerPoint for printing is in the elements of music section under bell songs at: <http://www.soundpiper.com/activities2.html>. I often hand out the bells by choosing children who are wearing the same color. I challenge the children to take the bell carefully and not allow it to ring until the music starts. I line the students up in order and ask them to hold the bell as professional bell ringers would (by the handle, bell up). I often start with “Doe, a deer, a female deer” from the Sound of Music in order to have them hear and sing the musical eight-note scale – do, re, mi, fa, sol, la, tee, do. I then open the bell book and we start by reading the rhythm (as above). We establish a slow, steady beat and ring the bell melody beat by beat as I point to each colored note on the page. For more musical activity ideas, go to <http://www.soundpiper.com/mln/activities.htm>.

Bell Songs
Carla Piper, Ed. D.

Twinkle Twinkle Little Star

Twink - le twink - le lit - tle star
How I wond - er what you are.
Up a - bove the world so high.
Like a dia - mond in the sky

Howard Gardner (1983) says that “if we can explain music, we may find the key for all human thought” (p. 123). Researchers will continue to conduct brain research in an attempt to understand music’s effect on human beings. Gardner encourages us to use the ancient arts and crafts of education to prepare youngsters for a world we can not anticipate or fully envision (1991). Gardner describes how we can help children reach their potential in each intelligence domain. We must start by first awakening or triggering the musical intelligence in children. We can amplify and help them strengthen their musical intelligence through practice. According to your own musical abilities, you can teach them to acquire skills and knowledge. If children learn and achieve beyond your own skill level, you can help them find musical mentors who will move them forward. We can help children transfer their musical intelligence to real life and prepare them to enjoy and appreciate all styles of musical expression. You just may be that teacher who connects with a child to awakens his or her musical intelligence.

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