Musical linguistics: How music and artistic creativity when delivered as a linguistic practice, help students master academic skills in English language arts

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MUSICAL LINGUISTICS: HOW MUSIC AND ARTISTIC CREATIVITY, WHEN DELIVERED AS A LINGUISTIC PRACTICE, HELP STUDENTS MASTER ACADEMIC SKILLS IN ENGLISH LANGUAGE ARTS

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment of the Requirements for the Degree Master of Arts in Education: Holistic and Integrative Education

by
Cynthyny Ann Lebo
June 2012
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June 2012

Approved by:

Samuel Crowell, First Reader

Kurt Kowalski, Second Reader

Date 05/29/12
ABSTRACT

This Masters project consists of two elements: 1) an integrated after-school program to improve student English language reading and academic outcomes for third graders’ vocabulary development by incorporating music, artistic creativity and linguistics; 2) a pilot sample curriculum that demonstrates the approach for building student comprehension through musical theater and Science, Technology, Engineering, and Mathematics (STEM) content experiences. Called “Water Buddy”, this is an after-school program uses singing, dancing, writing, and play to build reading and vocabulary skills. The goal is to improve learner academic outcomes by mastering the elemental building blocks of words, letters, symbols by making memorable the sound units, idioms, print conventions, and concepts that they were previously lacking.
ACKNOWLEDGMENTS

I am grateful to my professors, Dr. Sam Crowell and Dr. Robert London for their guidance, encouragement, instruction, and support. I owe deepest gratitude to Dr. Crowell, my first reader, who guided me in countless ways from the inception to final submission of this project. Very special thanks to Dean Dr. John Winslade, Administrative Dean, Dr. Kurt Kowalski, University staff, Robin Sullivan, Dr. Bronston, Gil Navarro, Jim Stewart, the reviewers, everyone and anyone whose acts of support assisted me to execute my project, including key university and state employees. Thank you to Bob Adam and family, the Elliott family, any and all contributing advocates, educators, publishers, colleagues, agencies, and institutions. Thank you so much to those individuals who participated or acted on my behalf and made this possible including my personal and extended family and friends for their ongoing encouragement and contributions.
DEDICATION

This project is dedicated to those students who don’t fit in, are often silent and twice as likely to fall behind, drop out or be misunderstood for lacking competency in English.

Thanks to my professors, Dr. Sam Crowell, Dr. Robert London, Dr. Kurt Kowalski, Robin Sullivan, Jim Stewart, the Elliott family, Bob Adam and family, Kenn Phillips, Bill Bronston, Lynda Reichbach, our readers, and the patience and support of everyone this project touched.
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CHAPTER ONE
INTRODUCTION

An Overview of the Project

This Masters project consists of two elements: 1) an integrated after-school program to improve student English language reading and academic outcomes for third graders' vocabulary development by incorporating music, artistic creativity and linguistics; 2) a pilot sample curriculum that demonstrates the approach in building student comprehension through musical theater and Science, Technology, Engineering, and Mathematics (STEM) content experiences. The population targeted is the large percentage of contemporary third graders (USA Today, 2011) who are not responding to our modern public school pedagogy. Many third graders who fail in vocabulary and comprehension learn differently or come to school unprepared. One solution suggested is utilizing after-school arts and science integration programs to compensate for a gap left by standard educational practices for slower students to improve their grades.

The author proposes a field of inquiry where arts and science are integrated in out-of-school-time, tapping into children's innate curiosity to solve their language
acquisition problems incrementally. By providing a bridge through musical activities and art to assist at-risk students to succeed in class, it proposes a path that leads to creativity, participation, and future success for those in double jeopardy (Hernandez, 2011). Since “language is music and music is language,” English language arts and reading standards can be utilized to weave music, drama, and dance instruction back into daily classroom practice while simultaneously raising student scores for below basic students (Ellis, 2011).

The author is an adult English as a Second Language and Fine Arts educator. Holding both academic and vocation instructional credentials, she uses multiple mediums to retain and motivate students. Her study poses whether a reconceived formulation of student involvement in music and the arts could turn failing elementary English student school performance around.

Scope of the Project

The scope of this project is a literature review and analysis of the importance of phonological awareness (PhA) development in reading improvement. Musical Linguistics is framed as a multi-tiered remedial reading process where arts-based interventions can accelerate PhA, within a
safe, socially engaging environment. It blends integrative arts in education strategies with reading instruction in order to familiarize students with the processing of the smallest of sound units. For example, studying sound patterns in speech through musical pedagogy can lead to recognizing the phonemes more fluently. This paper describes Musical Linguistics as an English immersion and reading remediation intervention program. As a Specially Designed Academic Instruction in English (SDAIE) intervention it expects to reinforce, immerse, and provide indirect instruction for additional student support.

The project will explore the potential significance of using music to help children through exposure to small units and larger packets of language that capture the spirit and value of gaining vocabulary more quickly. Musical Linguistics is significant because it uses the full sensory array to prepare children for higher education and inherent genetic drivers (emotion and creativity) to speed learning through pattern recognition and the accelerant joy of learning (Pinker, 1997; Brown, 2006). It differs from music training or accelerated learning because the learner is involved in creating and performing. The instructor is both part and background to the learner who is the central focus. The project uses
music and other arts to create one neurologically-based learning model that provides linguistic constructs to improve student outcomes and prepare them for academic success demonstrating phonological awareness development as a Science, Technology, Engineering, and Math (STEM) vocabulary immersion process.

Significance of the Project

A combination of music and linguistics (referred to as Musical Linguistics in this paper) uses a new and combined, well-researched pedagogic approach to redirect the negative casting that occurs in at-risk children. It is clear that certain students reject modern pedagogy and fail to embrace recreational reading. A new curriculum based on Musical Linguistics might mediate their preexisting bias against English and school. Musical instruction is theorized to positively impact behavior that demonstrates itself in an inability to master reading or failure in testing. It is expected to have a mediating impact on the attitudes that build from defensive self-marginalization, to poor attendance, poor attitude, and eventually dropping out. Improved vocabulary and content processing are a key to saving lives and retaining students to matriculation. Anxiety, self-consciousness,
and isolation are replaced with collegial behaviors inherent in the arts.

Public school was designed as a cherished asset as our nation formed, to enable the next generation to share in our culture, read, and be work ready. But certain current populations do not respond to instructional approaches used in American classrooms today. This paper examines whether the arts when used as an after-school intervention English Language Development program might incorporate applied neuro-biological research in order to positively alter our prevailing negative situation.

The project expects to deliver accessible and challenging state-approved content that captures student attention and brings student cohesion and rededication to learning in the classroom.

Should this paper's assumptions prove valid, it is reasonable to advocate for underwriting to redirect a percentage of present instructional dollars to allow teachers to integrate the arts within their daily instructional activities. In classrooms or in after school settings the goal would be to improve instruction and student gains, raise student academic capacity, and adopt mentoring behaviors. The paper proposes using state-approved, grade-level science, and English
instructional content in proven preschool instructional protocols (Pence, Justice, & Wiggins, 2008; Bunce, 1995). It proposes that musical awareness with phonemic instruction in tandem with English instruction scaffolding to help atypical learners to catch up. It uses phonemic awareness as an inborn instinct (Pinker, 2007) with developmental stages (Piaget, 1953) to meet student needs and English mastery goals (Pence, Justice, & Wiggins, 2008; Bunce, 1995). It addresses the needs in children with limited experience to be introduced to academic language and entrained into school social behaviors that are required in order to succeed. Learning study skills, patterning, specialized vocabulary, taking turns, and sharing resources become part of cooperative instruction delivered out of class time. Because English language and reading arts development can go forward in the public schools as they already exist, Musical Linguistics (ML) has the potential to meet federally endorsed benchmarks with a new kind of alacrity, the speed of learning in young brains. With limited English language experience at home after school higher order language experiences during the day can serve as a valuable remedial language arts intervention.
The process combines the benefits of singing and reading aloud using rhythmic pulse, melody, and movement as Phonemic Awareness (PA) reinforcement with English language learners. Musical Linguistics acknowledges a frequently unrecognized role utilizing the arts as a complex language, motor skill, and listening scaffolding with impactful social and academic benefits for any language arts/reading classroom. Using the three principles of motivation, involvement, and inspiration, the program premise aligns English language development reading goals with the needs of at-risk learners. For example: teamed with the symbolic components of print (alphabetic, symbolic, grapheme, and conceptual elements), and using California Department of Education visual and performing arts principles, music becomes a conveyor of meaning, memory, and content as well as self-control. It also serves as an introduction to print (Smallwood, 2008) and an anchor to Phonemic Awareness mastery through repetitive immersion. With a change in public school enrolled populations, in student daily lifestyles and common experiences, with a lack of adequate staffing or programs to supplement early education on site, human and economic factors leave a daunting barrier of both context and content impacting present learner outcomes.
The Situation in Schools

Although corporations demand that children need to learn complex skills with higher content knowledge, still too many students are "bored" with traditional methods of instruction, and their behavior provides strong signals as these at-risk youngsters fall farther behind.

The employable skills we require from public school graduates today are very different than those of former factory workers, farmers, and small businesses at the end of the nineteenth century. However one third of our children will not, cannot, or have not responded to the pedagogy schools offer them today. They don't fully benefit from the dollars spent on public education, and as a result drop out. Until recently, schools have been able to provide an approach honed for average minds with a presumption of similar enculturalization, in English as the home tongue. But the local culture has changed, and with it the U.S. K-12 audiences. For educational equity in public school to be sustained, these changes in American demographics in language and cultural perceptions, as different starting points, must be affordably, locally and nationally addressed as required by education judgments in the 1970s. Poor phonological awareness has often been the result of impoverished environments that generated effects
over time and inhibited intellectual growth and functionality to children exposed to those environments. In order for these children to gain their potential for educational equity, local schools must remedy "the impact on children from impoverished, inadequate and inappropriate intellectual environments" (Wilson, 1992, p. 38). Educators are being asked to address presenting obstacles in language, culture and experience in integrated classrooms that are co-ed, with less time, resources, staffing and still meet U.S. Department of Education objectives in testing. Without interventions, a large percentage of children will tend to under-perform on IQ tests and underachieve in school. Whether a result of home environment or a lack of English experience altogether, such social inequities can be beneficially impacted by brain-targeted teaching approaches (Hardiman, 2011). The goal of direct knowledge and skills transfer resulting from supplementing early ELD experiences recommended in this paper for at-risk children relies on brain plasticity research and long-term content retention to satisfy stake holders offered through the cognitive benefit of arts integration (Rinne, Gregory, Yamolinskaya, & Hardiman, 2011, p. 89; Hardiman, 2010).
Catching up or normalizing the intelligence quotients of disadvantaged children depends on remediating the "cumulative effects of unstimulating mother-infant interactions, inadequate young mother interactions, poor quality of home environment, inadequate language and vocabulary mastery experiences, and inappropriate educational and schooling experiences" (Wilson, 1992, p. 38-39). One aspect of catching up is the increased vocabulary gains exhibited in social and cultural comprehension. Thus integrated learning can offer an approach to help children leap beyond the limitations that they are starting with, supporting them to learn more naturally and adapt to their foreign experience—public school.

As animals that evolved with the mechanisms to be social, hunt, and exhibit choice, we have brains that formed around making noises reflecting evolution (Wilson, 2003, p. 47-61). At age three, children move from experiencing their world concretely to using words and symbols (p. 16, 32). Paraphrasing from Accelerating Academic English from the UC Regents by Robin Scarcella,

[Because] English Learners differ in terms of their proficiency levels and in cultural, linguistic, and socio-economic backgrounds they may lack skills in
beginning, middle, or advanced proficiency or skills in reading, writing, speaking and/or listening. Because they struggle with building sentences, pronunciation, or even in being able to read or write; they are difficult to understand and their speech is never fluent. From gaps in the ability to communicate ideas, form them and express them easily to more advanced subtle meaning making, with or without texts; composition, comprehension, and a lack of heterogeneity impacts their in class outcomes greatly. (Scarcella, 2003, p. 4-5, 52, 30, 113)

Components of phonemic awareness/listening, adaptation, and singing can prove essential elements in a learning paradigm can lead and pace these faltering students towards choosing the language progression that we want from them as their own. Repetition, rehearsal, and melodic intonation elements can add up in cumulatively providing a brain-based prescription for requisite resiliency required for language facility where there was none before (Scarcella, 2003, p. 29-30).

Singing is "conducive to productive educational experiences" building broader experience with "words and symbols" leading to "greater well being" inclusive of "sequential thinking" (Wilson, p. 47). Hence, bringing
back singing in the education of children, as an intervention for early language learners, makes practical sense (Bennett and Bartholomew, 1997).

Scientific Background

One gap: Homo sapiens do not arrive at birth with a full set of genetic directions and defaults; humans learn how to become engaged and effective grown-ups at maturity (Sousa, 2006). We do not rely on experience in the classroom, but on tested, best practices to instruct our progeny. With a gap between home experience with language and one at school with another set of rules and conventions, children are imperiled between faulty mimicry and being loyal to what they have already learned at home.

No two brains are exactly alike, since human brains develop from their own unique experiences (Pues, 2001). Neurologically speaking, the process of learning builds relay sets, described as circuitry pathways that store information (as memory) and allow access to these sets of stored experiences for future use (Begley, 2011). Research suggests how the brain learns may be described by three functions: 1) gathering stimuli as information; 2) processing that information; and 3) creating meaning (Ashcroft, 2008; Comings, 2001).
New and old conceits about the role of memory in learning and the power of music as elemental in long-term memory to bind content, its storage, and processing, promise to add a new dimension to our national concern for third grade reading success. This approach is based on combining common state standards for acquiring English language vocabulary with the idea that "text does not create meaning, meaning is in the reader's mind" (Rosenblatt, 1982). In order to enter the culture of the learned with larger numbers of children acquiring the capacity for Standard Academic English as English learners, classrooms must find a way to integrate socio-linguistic theory or to tie practice in Vygotskian relationships and Piaget’s developmental stages to daily interventions.

From a viewpoint of literature-based curriculum instruction, another paradigm emerges: neither students nor teachers nor administrators are to blame for children failing to thrive as readers with an eighth grade comprehension (Jalongo, 1992), but each can contribute to a better resolution. Despite present demoralizing conditions, the answer is already at hand in the structure of the triune human brain, and its innate plasticity clarioned in the resiliency of children. Key elements of
the arts in education reform movement are already in place nationally, and evolving.

Innate, in place, and evolving makes this project, as an environmental or school climate systems process, an intervention that is both additive and compatible with existing programmatic and sociological reforms. Musical Linguistics is proposed to bring a child’s academic participation up to par, by making the most of Vygotsky’s zone of proximal development using postmodern pedagogy (Wink, 2010).

This project suggests using arts integration immersion as its action plan for closing several gaps in student language arts achievement. By resculpting teaching protocols and using scaffolded reading strategies to reflect individual learning styles, this approach reflects the usefulness of blending a broad spectrum of developmental disciplines with anatomically-based understandings. This developmental research, led by neuroscience-based protocols, has the potential to accomplish English Language Development (ELD) goals, important to both traditionalists and innovators. The blending of phonemic awareness with neurobiological scaffolding (Caine, Caine, McClintic, & Klimek, 2009) seems especially important since the need is so great and
the potential for improving English Language Arts (ELA) results are so appealing.

Structural Overview of the Chapters

Chapter One explores the foundational thinking of this project.

Chapter Two provides the theoretical foundation of this approach, presenting the literature regarding arts and learning, neural mapping, and the relationship of music and language. It shows how this theory can be applied to a sample musical linguistics curriculum.

Chapter Three presents sample lesson plans including student handout packets. It also explains course concepts, and presents the methodology for asking reviewers for their evaluation of the activities and instruction provided by the curriculum. It also includes the rationale of who was chosen to give evaluation and feedback.

Chapter Four discusses the results of the evaluation data and potential revisions that could improve the project.

Chapter Five examines the broader implications of the model for education today.
CHAPTER TWO
PURPOSE AND OBJECTIVES OF MUSICAL LINGUISTICS

The Structure of This Chapter-Foundational Sequence

This chapter summarizes the project research and provides a foundation for Musical Linguistics as a pedagogical approach. The first topic area describes why the arts and other creative experiences are effective in the learning process. The second topic area summarizes important research in the neurosciences that support a new set of pedagogical understandings. The third topic area presents relevant research in musical and linguistic development as yet being incorporated into present thinking about language and literacy. The fourth and fifth topic areas present a thorough approach to the proposed Science, Technology, Engineering, and Math (STEM) curriculum and conclusions that summarize specific essentials used to apply the theory.

Arts Integration and Musical Linguistics

Arts integration (AI) is not new (Winslow, 1939), but its application as this unified unique field, musical linguistics, one that uses language in order to spur cognitive relationships gained in “a-ha” moments that
forward language mastery, has yet to be formally recognized. This project's pedagogic implementation will propose a domain within the Arts in Education sector or forwarding other independent community-based programs that serve as remedial reading English Language Development resource where mediums, signs, symbols, alphabets, sounds, and messages are practiced in order to pace, lead, evoke, and entrain student participation in school and skill advancement.

The Musical Linguistics Method

Through harmonization, attunement, and tempo, musical elements with genre, inclusive learning styles, and new sound awareness experience (PA, phonemic awareness and PhA, phonological awareness), children advance through applied experimentation in reading, writing, and semantic problem solving. These embed emergent literacy interventions by embracing meaning making through melody, pattern, and pulse (Justice & Kaderavek, 2004, p. 207).
Noisy and chaotic as a vehicle for practice and creativity, the medium (ML) gives children grounding in word play. This leads to school readiness by addressing low vocabulary knowledge (Lesaux & Keiffer, 2010, p. 596-597).
The Medium: Arts as Core Curriculum

Codified by state Visual and Performing Arts principles, the value of the Arts in the classroom, particularly Music, are that they are memorable acting as sticky processes that facilitate children acquiring the meanings of stacks of words and heaps of concepts all at once (tout d’un coup).

The Curriculum Premise: Making Vocabulary Acquisition more Accessible

These correlative patterns termed relationships carry corrective value for already defined ELA/ELD issues. Thus impacting instruction for English learners today, Scarcella (2003) refers to ineffective teaching principles (p. 19) including ineffective instruction in listening, reading, and practice talking and writing. Ladders to literacy include experience with phonological awareness, print concepts, alphabet knowledge, and literate language (Justice & Kaderavek, p. 207). Lesaux and Kieffer (2010) note that increasing vocabulary knowledge helps struggling readers and that “without increased vocabulary knowledge comprehension difficulties are not addressed” (p. 596).
Literature-Based and Community-Based Models

Musical linguistics was formulated observing that human creativity and the arts are not integrated into the school day study plan. In fact, they seem to be held apart from present core studies instructional policy and are treated in some districts as a fabled stepchild. Starting with a Language-Focused Curriculum chart prepared to create high quality pre-school student outcomes, from an article by the American Speech and Hearing Association (Gildersleeve-Neumann, Kester, Davis, & Pena, 2008) and a
thread of research based best practices for childcare providers for K-3 in emergent literacy practices (LSHSS, 2004, vol. 35, pp. 201-211), Musical Linguistics was proposed as a construct that might bear high contributive value. Three examples of existing curricula with differentiated linguistic staging were added as an underpinning for the premise of ML potential strategies for this study that will be presented here in later chapters (3-5). They are:

a) Singable Books: Smallwood (2008) has presented singable books as a learning strategy. This is a step beyond Specially Designed Academic Instruction in English (SDAIE), which recommends reading along with a tape, a strategy requiring complex processing. Smallwood adds melody and beat to reading to accelerate student success.
b) Phonemic Awareness: Lonigan (2006) has children participate in dialogic reading where students see a large format picture and build stories about what they see. The idea is to engage children so that those who don’t participate can be moved to join in.
Then Mole stopped suddenly.
An old, familiar, half-forgotten
smell had come to him. It was
the smell of home!
"Wait, Ratty, wait!" he cried.

But Rat kept plodding on.
Mole ran behind him, torn
with grief. At last Rat turned
and saw his sobbing friend.
"What's up?" he asked.

Figure 4. Dialogic Reader Model using Mole from Barnes and
Noble adaptation of Grahame's Wind in the Willows

c) Home Language Fidelity: The LAUSD Academic
Mastery Program (2008) builds bridges from home
language to Standard Academic English (SAE) by
honoring the natural connections children
already have made between birth and four years
of age and allow for children to learn to
cherish being multilingual. Code switching
(bridging between two or more languages) for them is natural and can express mastery. This model includes student fidelity to their (home) 'mother' tongue in order to pace and lead the student to familiarity with Standard Academic English (SAE).

![Diagram of Oral Practice, Ottawa Reading Model](image)

Figure 5. Oral Practice, Ottawa Reading Model

The foundations of this paper rely on combining and contrasting instructional elements used in speaking, reading, singing, and mature play. By studying existing demographic issues, and a curious rift in provider fidelity to the constructs of early language acquisition that include dramatic enactment, musical involvement,
artistic invention, and creative processes, a series of assumptions were drawn that might be addressed through neural plasticity. It was premised that the National gap in achievement, as well as student academic gains mandated in Educational funding, might be directly addressed by integrating findings in creativity, neural networks, musical experience, hearing and speech development, social and physical coordination, cognitive retention of meaning, and purposeful self-expression. Finally, the author looked to other programs to see if they were finding that these assumptions and constructs might also bear fruit (speed development and/or demonstrate portfolio or test score improvements).

Topic One: The Arts and Learning

This section presents an assessment of the impact of the arts on learning. In 1995, the California Department of Education (1995) published a visual and performing arts framework (VAPA) that prescribes art as a subject domain in daily instruction. A quick overview is: 1) the arts cluster meaning and help children to learn to think; 2) the arts build vocabulary through cultural exposure, critical assessment, experiential applications, and teamwork or management of limited resources; 3) the arts
help children see interrelationships across many disciplines. By their nature interdisciplinary, the arts use the medium to transmit the message. Building on the fact that children have differing learning styles and intelligences, the arts can make learning through the senses open a child’s window to the world (National Arts in Education Development and Dissemination Model, 2010). The arts can integrate several disciplines simultaneously: English, history, technology, math, chemistry, aesthetics, politics, sociology, culture, anthropology, and more. In 1999, and even in 2012, the Arts, although now designated in the U.S. Federal Register as core subjects, are still awaiting substantive financial support in local school budgets annually. For example, Los Angeles Unified School District (LAUSD) and the L.A. County Arts Commission had an 11-year master plan that included “Arts for All” students, but it never reached all the student body and is now in shreds because of the state budget crisis. New research at Johns Hopkins School of Education supports the value of Arts in Education as a core study area (Rinne, Gregory, Yarmolinskaya, & Hardiman, 2012). Under present conditions, although the Arts support student learning, many public schools are unable to prioritize funding streams that continue to support the Arts.
Art Makes Studies more Memorable

Art gives voice to the voiceless, involves multiple learning styles, weaves cognition and language, and makes course work memorable. It engages senses where the perceiver makes meaning, and as a practice, both the artist and the audience are changed (Brain/Mind Learning Principles in Action, Corwin Press, 2005).
B. LANGUAGE-FOCUSED CURRICULUM FIDELITY CHECKLIST (BASED ON BUNCE, 1995)

Figure 6. a) Adams Model. b) Bunce Fidelity Chart
As a connection to complex human experience (disgust, wonder, empathy, compassion), the arts move students to focus, explore content and meaning, and contextually they acquire familiarity with science, history, politics, and social studies. Group process acts as a sensory array to learn in peer-to-peer formation faster, deeper, and for certain students this is especially impactful. Whether dominant as a visual, kinesthetic or auditory learner, or one that comes from another culture or with a special need either psycho-social, physical, fiscal or brain-based, meeting these presenting needs could brighten the managing paradigm (school climate) while still giving the instructors necessary control.

Children learn communication skills through practicing presence, performance, occupational safety, and resource management. In Learning in Drama, British educator John Somers states that through Drama Instruction, children take ownership of learning and embody desired outcomes (Somers, Drama Instruction Analysis from Project Zero publication, figures 1-5, p. 109-112, Harvard Graduate School of Education). In lyrical content drawn from Geisel’s books (Dr. Seuss) and characters, such as The Cat in the Hat and Horton Hears a
Who, L. Ahrens (2000) through her Cat in the Hat narrator states: "Oh the thinks you can think lining up to get loose," and "anything's possible." Art brings out the best in students and inspires them to learn and to produce. In effect, "Attention, motivation, and thinking are impacted" (Gazzaniga, Ashbury, & Rich, 2008).

**Arts Education Leads to Recognizing Patterns**

It is human nature to recognize patterns. Art allows us to make connections with our own psyche and experience that makes meaning present to each individual's personal understanding (referring to for example to songmapping in Songworks I by Bennett and Bartholomew, 1997).

![Brain Neurolinguistics Graphic](http://www.ielanguages.com/linguist.html)  
**Figure 7. Brain Neurolinguistics Graphic**
Somers would say: 1) "we story the world to make meaning of it and our place in it"; 2) Drama (story enactment) bridges the amalgam of stories that society has decided to tell us about what we know; 3) Somers confirms (p. 112) that "we do not directly experience most things we 'know'". The arts awaken human potential (brain power) and academic capacity by aligning mindsets that are conducive to learning. By the willing suspension of disbelief (quote from Aristotle's Poetics referring here to imagination), children can enter the academic world and the natural world finding their footing in a cultures and experiences that before were inaccessible.

Using Sonoral Connections to Link to Social Messages

Babies in the womb hear vowel sounds. The musical patterns in language "tone, pauses, stress, and timbre" are the "sonorous units into which phonemes, consonant, and vowel sounds of language will later be placed" (Stansell, 2005, p. 6). Quoting the founder of modern speech therapy, Dr. Van Riper in whose Prentice Hall article on Speech Correction (1984), he asserts that infants begin with 1) crying and comfort utterances; 2) babbling; and finally 3) acquiring/comprehending words that lead to telegraphic speech (Stansell, 2005, p. 6),
Art mimics human development. In theatre, performance links to meaning through telegraphic conventions (script/story, voice, and thematic material). It transmits through those signals to the community where others can receive the message. As an analogy for the public square, arts function as a meeting place for information exchange. They can mimic the town crier creating a place to see what we are learning and mark it in our culture (Jalongo, 1992) as well as inform and direct. Greek tragedies for example used drama as a group gestalt anchoring values. The plays warned the community to pay attention to the dangerous impact of hubris and to cultivate humility through character development and choral commentary. The speakers corner tradition in Hyde Park in the United Kingdom, is an example of adlib or formal public communication, that whether through a chorus or an individual, supports our experiences: 1) to teach each other and 2) build a common understanding that is reflected in idioms and common speech that reflects the times, previous history, and present evolution. The dictionary and literature record thought reflected in speech and evolved in our culture. Values that are transmitted back to us through the Arts are then archived in the development of an expanded working vocabulary.
Language building starts with a baby looking in the mother’s eyes and making simple sounds and receiving
foundational attachment, recognition, and praise. From cooing sounds to full sentences, children recognize patterns by marking linguistic correlations bi-laterally across the two temporal lobes:

The left side recognizes words and the right recognizes patterns. The left models relations between events across time, while the right brain favors relations between simultaneously occurring events. Language almost exclusively represents the outside world in a symbolic way and music seems to reenact experience within the body, mimicking experience by carefully replicating temporal patterns of interior feeling in a world of turbulent flow. (Stansell, 2005, p. 20)

The Ancient Greeks, described in Stansell's (2005) paper on music and language, understood that the Titans' mother Mnemosyne (Memory) gave birth to the nine muses who presided over song and were prompted by memory. Seven of the muses used their gifts to inspire language and the eighth focused on astronomy. The ninth enthralled humans with choral song and dance. (p. 4)
Science and Art were entwined in the Graeco-Roman tradition, and the pattern might organically occur in this program in the course of the combining STEM and STEAM.

By the social recognition of the value of music, language, dance, and song "as important as the sky and the sea" to human culture, Stansell (2005) regales the Grecian cultural bias for recognizing patterns still anchored in the shadow of curriculum mandates of today. The Arts can make science memorable and learning natural (Landesmann, 2011). "Words make you think thoughts, music makes you feel feelings, a song makes you feel a thought." Yip Harburg (from Internet Magazine of Stage Reviews and Opinion, April 26, 1998).

Topic Two: Innate Capacity for Language and Learning

By weaving stories of humans, memory, words, works, and Gods through songs and stories (myths), we have received a legacy that connects us back to our evolutionary source of being born in emerging out of water habitats and storytelling (Ashcroft, 2002). Stansell, Jourdain, Zatorre, and others describe genetic capacities, which pattern through of the structures of our brains, our sense of place and time, ancestors and progeny, and life's evolutionary flow (Bullfinch, 1855; Stansell, 2005, p. 4).
From mammals whose epiglottis evolved to separate swallowing, breathing, and sound making in order to hunt, we became beings who speak, confer, and make choices, alone or in groups. This is witnessed in the marks we have left behind. Like the rings of trees, whether cuneiform, sculpture, scripture, hearsay, or playlists, human emergence from living in the water, on land, and through sustainable agronomy has left a record of our lives. In the Middle Ages, we began a long transition into print culture and collaborative work leaving archives of culture in essays and illustrated prints. Today we teach the backbone of this legacy by teaching the units of language in phonemes, morphemes, graphemes, and n-grams. Vocabulary is acquired from meaningful context.

When young children find their voice and read aloud expressively sharing a common mime, like The Lion King or The Hungry Caterpillar, we are passing culture along to children and directing their futures. Their families who perhaps may be outside this book culture, are still outlying our shared American pastimes of cherished literary experiences and recreational reading. The process brings the whole family back into the loop (Education Section, p. 8, #42, United Way Report). We build to Academic English by broader knowledge of words, concepts,
language structures, and interpretation strategies through reading (Eric Digest, What Elementary Teachers Need to know about language, November, 2000).

From Sesame Street to Headstart, and from the Business Roundtable to our state’s reading development initiative, we have been struggling to have children “get caught reading” (a national multi-year Association of American Publishers Campaign). It is necessary for children to become enchanted, because reading recreationally builds vocabulary and vocabulary builds comprehension. The ma, ta, ka, ba and other striking of consonant sounds to vowels are part of the foundational social-emotive, psychological, and physiological frames that become reflexive and conversant. Mary Helen Richards, the Kodaly and the Solfege systems have roots back to Pythagoras which link spiritual, cognitive, and physiological states to focus, clarity and self-expression. In this vein, singing in the classroom can be restorative and supplement missing social support.

The arts (pattern recognition) spur curiosity and support brain development (Catterall, 1995, 2003; Bernstein, 1999). The arts systematically incorporate visual, kinesthetic, and auditory sensory perceptions into the course content through self-expressive play during the
zone of proximal development period defined by Vygotsky between birth and eight years old (Wink, 1997). This is the developmental period expressed in the literature by Piaget, Vygotsky, and Dewey where thought bridges to language and sound pattern recognition with wholes and parts of words. Cries exhibited by telegraphing gestures and signaling conventions, become scribbling and making marks that are the precursors to print (Lenniger, 2006; Sheridan, 2002).

Leaving our Mark(s)

Over centuries, a body of knowledge has accumulated proving the existence what Pinker calls the language instinct. This is, according to Pinker, an innately human capacity that is not born with us (Pinker, 1994, 2007). It is constructed from experience. Humans are born with a long maturing process that guarantees we have the time to grow our own programming. Language moves humans from animals that made sounds and used tools to self-conscious beings who can converse with others and build stories. Over time, these weave into a group consciousness that we call culture. Unlike other animals that come hard wired, humans build knowledge and grammar from play. As social learners, we “brew” our wiring from babbling. Even deaf children who only sign begin by babbling in sign. As we
moved to the page as the commons for communicating, society chose to build readers as a part of educated culture and progressively forgot this innate deep-rooted oral potential. By returning to what is universal in the structure of our biology, learning is a cellular event. Children are born with the physiological ability to identify and make 47 phonemes. From birth, the human voice plays a formulative role in the infant’s development of auditory discrimination skills and cognitive (Wilson, 1991). From listening as an infant, sing turns into sign as we learn to communicate and develop the neural patterns to succeed outside of our homes.

**Play Expands the Impact of a Lesson Plan**

Children love to play with meaning making and this supports the process of: a) jokes, poems, and storytelling; b) writing; c) memorization; d) socio-play; e) universal grammar. Children acquire words, making meaning and learning how to express themselves. Words and concepts are core building blocks to succeed when they read. Realizing the multiple connections to cup (the item), cup (the word in alphabets), cup (the sound), and cup (the symbol) (Puera, 2001) can make building images, contexts, and vocabulary in school and art possible and support nerve development that facilitates rapid
processing or fluency. Children without enriched and
differentiated experience do not develop this skill set.
They lack the language process that leads to decoding and
the causal wiring. Listening, scribbling, babbling, and
processing time as well as movement, peer-to-peer impact,
and safety are part of socio-cultural development and
prohibited in a hegemony that is short on time, high on
tasks, and closing down districts and schools for
non-performance and lost accountability.

Ashcroft (2002) explains that children build a
developmental path between oracy and literacy into
alphabet, syllabary, and idiographic or logographic
arenas. He reminds [in his research] of studying the
process of writing and sound encoding on different
continents including their literacy instructional success.
Ideas are stored in an interconnected process that makes
us search for both reality and who we are in relationship
to that great oneness that we live in
(eidolons/holographic brain and universe). Music and
language more than building a consensus learning reality
for students, and establishing an area of exploration
(brain-targeted teaching) for teachers and administrators,
when observed through Ashcroft’s model on operant
communication behavioral output and Hawkin and Weis’
(1985) social development model (p. 49) could make Werner's "at-promise" reality theory reachable (p. 78).

Figure 9. Social Development Strategy

Hawkins & Weis
Figure 10. Brown on Kandel

Should schools become truly safe for both teachers and children to form (from their own reasoning) a community of trust to take the risk to learn, this would benefit everyone due to 2-way communication in the classroom. When children feel safe they are really excited to learn and their holographic brain empowers them to read and remember their lessons (Ashcroft, 2002).

Symbols and Stacks of Words Help Us to Communicate

Peirce talked about a trichotomy of signs: "icon, index, or symbol" (Wachsmuth, 2008).
Figure 11. Dana Foundation Model (Multilayered Domains)

Figure 12. Piercean Classification (3-Pronged)
In the building of neural networks, children learning to discover, review, and practice use all three levels of Peirce’s classifications created in his scientific papers (Peirce, 1902). Created to make stacks of meaning from ma (space, pause, gap), ka (spark of life part of the soul, amphere, a brand name for a show), ba (soul, barium, bachelor of arts, a country), ta (truth, Tamil, a mark, a wound or carving into canvas), wa (harmony, gentleness, peace), these symbols and sounds begin the learner’s way to vocabulary, concept, conversation, and higher order domains which we roughly depict as thinking. Our central nervous system is informed by reactions from stimuli from the outside and our eyes, ears, mouth, lungs, vocal cords.
are part of a systemic response where we communicate through emoting, telegraphing, and processing (this includes the fear or flight response and defended behaviors). High frequency words are state ELD strategies for blending quick recognition of small words to equalize inequities where 90 home languages are spoken (AB 1548). Standard Academic English allows children to learn to think together and be school ready for the content we require of them as 21st century learners. Language frames our thoughts and sets contextual understanding. Despite this fact, dolch words do not replace through accuracy or fluency, the need for comprehension.

Figure 14. Body Language Triplicity
Topic Three: Language Gains by Musical Experiences

Just as music oscillates between public and private view, so does Arthur Hull’s social process of teaching without teaching which imprints through the delivery of live community music. The Hull drum circle facilitation technique (Hull, 2007) entrains teachers through a series of classification symbols and signs in written short hand or triptychs (triplicity charts) that allow teachers to work within a live performance/teaching events and confer with peers about choices and their consequences. The Hull community drum circle model asserts that songs matter both for groups and for individuals. By building songs, phrases, idioms, and sentences through rhythm, timbre, and pattern, students are empowered to find their voice and recognize other voices. The process creates community from listening, hearing, and responding. It builds a resonance of health and wellbeing from working in concert and finding one’s voice (Hull, 2006, p. 79; Bittman, 2009). The social-learning presenting event is aesthetic, empathic, and unifying. Such choral interventions use both unified field theory and the biorhythmic principals that put the classroom in focus or student brain waves in sync (Bateson, 1973, Second Order Cybernetics). It is a vibrant
form of interactive biomimicry or might be termed biophony (Krause, 2002).

Drum facilitating uses Hull's triplicities or intersecting Venn diagrams to describe the event. The circles depict the status of the rhythmic community and map the flow of the process of the person presently facilitating. As instructor curricula, these charts symbolize agreed upon protocols charting the path to successful facilitation (directive/nondirective orchestration) that looks effortless and simple. The cardiovascular, sensory-motor, and social complexity of drumming has all the elements of integrated instruction, directed learning, complex immersion, and optimal focus. It is homeostatically leading children, unlike the Pied Piper of Hamelin, back from the threat of destruction and towards reconnection to the village that needs them.

Community is that entity to which one belongs, greater than kinship, but more immediate than the abstraction we call 'society.' It is the arena in which people acquire their most fundamental and substantial experience of social life outside the confines of the home. (Cohen, 1985, p. 15)

Thus school becomes a community when the shared musical experience gives children permission to risk
school success by contributing their own song. This also includes parental involvement that is a major focus in Response to Intervention (RTI Action Network.org). Relevancy and Rigor through Arts Integration

Performing, for the purpose of this paper, is a substrand of ongoing English Language Arts instruction designed specifically for after-school settings. It proposes that schools use an arts integration model to meet, exceed, or restabilize the school district’s English master plan. The goal is a response to intervention that leads to fluency. A music community that arises out of group collaboration gives children a ‘sound’ sanctuary and the potential to crosswalk through layers of language reinforcement towards a new future. A developmental path emerges from direct, imbedded, and indirect experience with Standard Academic English, vocabulary building and active participation. It follows ASHA guidelines and gives children a chance to retain literature rich scaffolding that might otherwise be ignored by their reticent instructors.

Art bridges language gaps by expressing, experiencing, or witnessing the human experience whether voiced or unvoiced (Smallwood, 2008).
Pulse, socio-emotive context, rich vocabulary and practicing to perfect skill sets bridges old behaviors and sets up interest in excelling in fluency. This instills a sense of place claimed by feeling that revitalizes learning by inviting our soul into presence here and now. "The world is awake and the sunshine sparkles loudly" (Murray, 2000, p. 55). Place and feeling connect our pulse, thought and breath to others. Through "call and response" learners begin to pattern, discern, and relate. Quoting Swimme and Berry research in 1992, "The heartbeat and the 'Great Story' connect our sense of place to the world soul... transforming ...fragmentation [in]to a new way of seeing and believing which can awaken a broader perspective of Earth and her processes as well as the interdependence of life" Miller (2000. p. XX).

*Sing Singing Sparks the Imagination-Learning through the Voice.*

Our spark takes root and our heartbeat begins with a deep breath (Ruach, Hebrew) as we separate from the mother. Rediscovering the heartbeat as a unifying element that links us to each other and "into a place for the process of experiencing deeply to begin". An educator can act as catalyst for students to transform the school climate to one of feeling (Murray, p. 46, 102). Lacking
such an educator, a music specialist or arts instructor might bridge the gap.

Art Harmonizes the Classroom and Builds Self-Control

If the time is now and the future seeded in the classroom’s teaching moments today, then active learning experienced through vocalization allows students to become 21st century learners. By “developing a path of action” and utilizing [their] “caring hearts and critical eyes”, students reach to meet and go beyond the standards. By integrating language and music into teaching moments to build deeper vocabulary and more rapid comprehension from lived experience public school goals for improved inclusion and equity are met (Wink, 1997, p. 145-146).

Learners Discover Voice and a Locus of Self-Control

Art offers children who may have no other way to communicate, a medium to make sense of their own world, feelings, and understanding. Idiomatically defined as finding one’s own voice, art has vital importance in balancing an angry outside world by making connections on campus, finding empathy, making comprehension and compassion viable. For example, the Seskin song, “Don’t Laugh At Me,” teaches respect on school sites burdened with bullying and violence. The derivative Seskin and
Shamblin book (2002) evolved to a national public school project i.e. Operation Respect (1999) in New York then became a touring school program and educational initiative. Thru the Arts and Music, the Muses, and the medium, praxis and creation transform an angry classroom into a relevant place to share meaning and a rigorous process that students undergo to apply what is learned and master it.

Learning to Value Words

Words are not just words. They are the nexus, the interface between communication and thought. ...It is through words that we build, refine, and modify our knowledge. What makes vocabulary so important is not the words themselves, so much as the understandings they afford. (Adams, 2009, p. 180)

Although direct study of language is essential to student progress, most word learning occurs indirectly and unconsciously through normal reading, writing, listening, and speaking (Miller, 1999; Nagy, Anderson, & Herman, 1987).

Dance, called the mother of the arts, and pulse, rhythm, meter, with phonemic awareness has interesting and correlative potential for strengthening student outcomes, increasing interest through physical engagement, and
focusing awareness (Aguila & Guleck, 2008; Lutfi & Repress, 2006).

Leaping beyond SLP Fidelity: Student-Centered Solutions

There is an opportunity to combine the experience of young school readiness providers with available early education research in order to help their students to use the youthfulness of their biology. By aligning their innate capacity to learn with school goals through community arts experiences a gap in performance can be remediated student by student. Including student-centered learning with groups of peers, this intervention is a lively and fun solution for students. Given the threat of school closures under federal guidelines, the raising of individual and group capacity has big implications should the premise of the Musical Linguistics project prove its efficacy.

Schools are in a reformative period where awareness, adaptation, and rapport can contribute to best practices being adopted and best outcomes being supported. More and more educators are responding to this research-based approach.
Soundscape Teaching

Through the "readability, telegraphing, and congruency," of one of Hulls' diagrams, (2006) with the right coaching we can see/feel/hear and therefore "read" the health of a classroom. If schools will not support peer-to-peer learning or student-centered responding ability in teachers, in a sense the community weakens. This is a bio-marker similar to Krause's Soundscape Ecology (2011) of the health of the community, in this case, resistance signals whether comprehension is inclusive of all the learners or not. Brain-targeted evidence may lead to the conclusion that "including the messages from our most at-risk learners" is more cost effective in the short and long term (Campbell, 2002; Ashcroft, 2002).

For at least the 35 percent of failing students, who telegraph their response to traditional methods as a resounding "no" to direct instruction, this approach of using music to realign interest in the value of school, in building language, and in finding one's passion and one's voice unites universal patterns, interactive rhythms, and melody lines. Music harmonizes responses and behaviors in children reflecting the developmental stages of the human brain and educational findings that no two minds are alike.
and each learner has a preferred learning style. For children who may be bored in school, the arts offer another way into learning. Arts are inclusive, collaborative, and inventive. They allow children to be innovative at school and get their needs met through self-application. Live drum circles, as other arts in education processes, seem from the outside to be noisy, chaotic, and unstable, but they allow children to make the bridge to bigger concepts and own the work that they do. To review: cultural and identity attractors meet chaotic movement in the dance of finding a healthy song. Development builds Standard Academic English

Using participation, facilitation, and creation produces pride, safety in risk taking, collaboration, and daring the impossible to make classrooms happier places. Children like to test their own capacity when content is complex and challenging. Teachers can encourage students who otherwise might not participate to take a hand in a group or solo processes. Small efforts can have huge results reflecting Lorenz’s Butterfly Factor. For under-funded, fragmented school culture, this entrainment to order from disorder, not only nourishes students, but also moves the system back toward greater health. Drawing on the four quadrants of the Bernstein’s Artful Learning model, “Experience, Inquire, Create, and Reflect,” (UCLA
CRESST Report, 2009), students can be brought to an awareness of the language of general, technical, and academic texts. They can release their innate curiosity, which drives the learning process. SAE becomes tangible and desirable for their own purposes.

Finding Resilience

It is art that informs the process. It is meaning making that makes it relevant to children and builds intercultural understanding. Universal symbols arise that students can discuss with their peers or in their journals. Portfolios can deepen how a particular child’s capacities are perceived. As Piaget said, “The principal goal of education is to create men who are capable of doing new things, not just simply repeating what other generations have done” (Kaufman, 2010c, p. XX). Los Angeles Unified School District Arts Evidence guides are required by their community arts providers to detail the content of each lesson plan in terms of artistic perception, creative expression, historical and cultural context, aesthetic valuing, connections, relations, and applications (California Department of Education, VAPA Standards, 2004) required each participating agency or artist-educator to demonstrate how state standards-based instructional scaffolding and rubrics would inform
students and raise their aesthetic and academic skill sets.

Making Connections

While working with art concepts framed to make connections between meter, math, and motion understandable, science concepts and narrative composition can become easier and technical words can be more familiar. Addressed through music, the problems of motivation, basic skill deficiencies, and practice can be improved using Bernstein’s Artful Learning framework (i.e. learning in the context of another discipline). Through music, long-term memory is accessed. School becomes cool, instead of intolerable. Like the U.S. Department of Education’s Mars 2030 project, children’s questions about “What I want to do?,” “What is my dream?,” “What is my passion?,” and “How do I get there?,” are in the fabric of the content and its delivery, addressed as a collaborative and individual motivating factor that ties subject matter to both rigor and relevancy captured in the writing portfolio.

Moreover, music can allay a fear of testing and move children into a creative, thinking and joyful experience achieved by embracing core California Department of Education’s Visual and Performing Arts Standards (Taylor,
Songwriting, building words and music, can help children make meaning out of tough subjects or alleviate certain tension over grammar, terms, and calculations. The fun of making a story or creation can lessen the fear of failing. As a part of the applied music instruction lesson plan, making judgments that are not enforced but discovered, empowers decision-making. Using Kaufman, Davis, and Beghetto’s micro-moments to strengthen a student’s creative potential, when it comes to everyday creativity, it is not so much what one does as how one does it (Beghetto, 2007; Richards, 2007) (Kaufman, Davis, Beghetto, p. 5). It is not what ideas that children build with language or even that they be teacher described ‘task-appropriate’ or ‘situation-meaningful’, but that children use matrices of language, rhythm, meaning, domains, and sub-domains to begin higher order thinking by practicing with idioms, phrases, relationships, and interrelating silos of information. The process informs the brain and the brain builds from what is used the synaptic conditions for rapid conduction.

Storytelling leads students naturally to a new cognitive level because of the desire to make sense and accomplish mastery within a fixed form. For example, "The Green Song" from Too Much Fun (Stone & Krubsack, 1992),
plays with tempo and group process to conquer fear of class participation with invention and laughter. The children offer names of what is green into the song and these nouns become part of the song. The group drives the content and the leaders give tempo and emotional color to the game. Here is an example:

Leader: Green, green, green, the prettiest color I've ever seen
Green, green, green, the prettiest color to me.
Chorus: Frogs are green and trees are green, alligators are green, pea soup is green.
(The list is sung faster and faster, with ongoing student contributions in the choral section.)

Inside the Brain
Based on the relationship past experience (we remember 90 percent of what we say and do) and our level of involvement (active learning increases our levels of receiving, participating, and doing), asking children to add their own ideas into the framework of the song uses not only Dale's Cone of Learning (Pues, 2001), but increases the fun by allowing auditory processing without the dominant visual-tactile reporting process. Active involvement with language can revive learner involvement and over time raise individual and school score results.
Phonemic awareness in readers has been recognized as key to the development of basic reading skills and allows students to learn their own way or take the time to emerge in learning. Code switching or delayed learners may improve their behavior and they report enjoying the process. Neurotransmitters along the basal ganglion that regulate and integrate sensory, emotional, and voluntary input, and express as motor responses through playacting and art to develop the motor and somatic cortex. Through practice, the regulation and integration of the body into classroom practices allows children to learn how to respond, when to respond, and with what to respond in an academic setting. The limbic system (stress response) can, through mature play be soothed with babbling and recreational music and the prefrontal cortex, the part of us that regulates our behavior, through artistic experience can attune its central nervous system inputs to master topics, activities, language functions, language structures, and vocabulary.

Both brain hemispheres learn to communicate through the third binding element, the corpus callosum.
The properties of certain fibers are correlated with specific cognitive abilities. For example, certain fibers in the corpus callosum are correlated with phonological decoding (Wandell Lab, Stanford, CA).

Figure 15. Corpus Callosum Image

Musical brains and women show more neuronal activity in brain maps. It is hypothesized that by practicing music or multitasking, that minds have more circuits to process visual input, expressive language, and receptive speech faster. "Impoverished reading skills in comprehension, may result in poor life outcomes in a knowledge-based economy, and many children cannot handle the text demands of the curriculum in order to work and learn independently" (Lesaux & Kieffer, 2010). Preschool phonological awareness that contain a number of phoneme-level items (phonological awareness, environmental print, letter knowledge, and
mixtures of blended, detected, onset syllables and sounds has become a study area. (Lonigan, 2002) Word reading accuracy, fluency, and vocabulary knowledge are impacted by familiarity, experience, and recognition; all of these elements can be embraced by arts instruction in tandem with musical practice and performance. The mutual goal is to measure a child’s ability to detect or manipulate large sound units. One goal in this study is to improve this capacity.

**Plasticity- Use it or Lose it**

With divergent home languages, some children may only achieve success through artistic expression. The arts bridge content to cognition and the personal voice is best described in the *Seussical* lyric (Ahrens & Flaherty, 2000), “oh the thinks you can think.” Without such important cognitive development, when the brain prunes its pathways around the age of six, underdevelopment can become its homeostatic state (Chechik, Ruppin, & Meilijson, 1999). This is what the United Negro College Fund billboard emphasizes when it says “a mind is a terrible thing to waste,” making reference to children who lose the potential to catch up later by the lack of enrichment in the zero to eight year accelerated learning period.
Building New Neuronal Pathways: Components of Faster Processing

By singing, new neuronal pathways to phrasing, definitions, grammar, and physical relationships are built. The repertoire can easily bypass the 220 Dolch (high frequency) service words that signal school success in California law. (California Assembly Bills: AB 3482, AB 1086). By adding a discipline like drama (play creation), children can make new word friends out of the scripts they derive from playing with character, plot line, and scenario. The catalyst of thinking using the arts opens the mental window to the other 19,000 to 40,000 words that will be needed to graduate from high school.

It is not enough to learn grammar; the student has to apply it (Lightbown 1998; Spada & Lightbown, 1993; Celce-Murcia & Larsen-Freeman, 1999, p. 4). Community music allows students the opportunity to practice, pursue new cognates, and gather lexical dexterity relevant to the moment that can add toward the 250,000 words that will give them a realm of meanings in syntax, morphology, etymology, and concepts.

Proving the power of practice, cantillation (singing while reading), and lyric writing with low English proficient learners allows children to explore how
language is formed, who, when, why is a form used, and what the form means in small phonemic and print applications. Singing (rhythmic incantation in time or with melody) also binds the content to memorable experience, personal viewpoints, and culture, and allows the words and phrases to become new learned content because of individual joy and personal pride in the creative process. For example, singing songs about a river when an urban raised child has never seen one.

Children build stronger potential as they play with words and make pathways to grammar and meaning out of babbling. Pinker states it is the built relationship with verbal expression, sensory input, and linguistic distinctions in language (vocabulary, idioms, conventions, and culture) that make humans excel. Pinker's perceptions are important: a) human beings do not think in English or Chinese or Apache, they think in the language of thought; b) humans have a special ability to make noise, and because of this precise combinations of ideas arise in others' minds; c) phonetic perception is like a sixth sense; when we listen to speech, we perceive language; d) in our social relations, the race is not to the swift, but to the verbal; and e) there is more going on in children's

Similar to the success of the ABC song, they crack the code and break the content into comprehensible information chunks by adding memorable melody and groove. Suddenly, like the water pump scene in The Miracle Worker (1962), a film about Helen Keller, there is a leap of positive emotion when a skill is achieved and the word, meaning, and concept linked. "W-A-T-E-R. It has a name," firmly says Annie Sullivan to Helen Keller. Magic happens when Helen answers, "Wwwww-aaaaaaa-tur-rrrrrr."

Music can support that kind of experiential learning. The musical process of making the right sounds to communicate is natural when ears, eyes, friends, and teacher reinforce that first step towards improved participation (Pinker, 1997; Ashcroft, 2002). The joy of make believe, chorus, group writing, word games, and improvisational theater with a underpinning of singable text, allows children the joy of creation and gives them another type of experience with meeting reading on their own terms (Grigorenko, Jauzvin, Tan & Sternberg, 2008, p. 11; Kaufman, et al., 2010). Building confidence in making sounds is part of the risk taking and self-discovery process. The "a-ha" moment that school
superintendents have been looking for in the arts may be in that Keller moment where the four elements of letter shape, letter sound, syllabic/consonant collision, and symbol make it smoothly across the brain hemispheric bridge. Reading on the beat shows children the groove of having fun reading.

In this context, music combines relationships, intuition, and reasoning in the midst of challenging skill sets. Music prepares children to use their senses in contextual problem solving, not unlike making it through sight singing a piece of music for the first time in choir. Smoother reading, for example in a mathematical context, seems closer to Eisner’s discussions of the arts as an experience of “acquiring skills in judgment in the absence of rules (Eisner, Visual and Performing Arts Standards, p. 4).” This shows learning higher order thinking through creativity can be “naturally integrated into teaching and assessing domain specific knowledge,” in this case fluent reading in English with rhythms and intonations that make sense (Eisner, 1996, p. 4 and 304). As Benjamin Franklin said, “Tell me and I forget, teach me and I remember, involve me and I learn” (Kaufman, et al., 2010, p. 380-387).
How Musical Linguistics Enhances Vocabulary Gains

Language is an instinctual neurobiological process. It is acquired in stages. Musical theater and dialogic reading allows children to "babble," "invent," and "dance" their way into vocabulary bridging from small phrases to whole sentences and from telegraphic and private speech to public self expression using contemporary phrasing. Combining reading with group and individual activities allows children to perform, learn from their peers, and to take risks in a spirited way. By combining pragmatics with arts based language practice, integrating risk-taking creativity with action performance, the proposed curriculum concept will present children with many development opportunities.

Arts Integration and the Musical Linguistics Curriculum

The ML is a passion-based, differentiated instruction approach that allows children to cope with the risk factors at large, including the lack of resources, substance abuse, risky communities, biological factors, emotional factors, and chaos by providing a protective environment that provides bonded attachment through language, prosody, and rhythm, even for a short time duration. In Werner's terms this would be creating an
at-promise environment in a formulated way that allows children to create a new locus of control that attends to the predictors and behaviors resulting in successful participation in school as learners. Music becomes a biofeedback training mechanism to mitigate risk (Ashcroft, 2008).

As a concept, Arts in Education, particularly Arts Integration can evoke a return to a natural state of social learning and a leap forward to expanded understanding perhaps previously forgotten. By fusing procedure, protocol, and locus of control, the arts give children a representational vehicle for exploring voiced and unvoiced thought. The arts make a way in language arts and reading where there was none. By allowing for brain differences and supporting synaptic solutions that involve processing time, supplementing previous knowledge, and brain building (mapping new pathways), the arts immerse children in enriched settings with supportive facilitation. This reinforces necessary and vital language acquisition. By respecting the "no" to direct instruction and turning it into "know," children are able to redirect chaotic behavior and transform it to active learning using neocortical dynamics for inclusion and future rewards (Caine & Caine, 1979, 1990, 1994; Gardner, 1991).
When the student is fulfilled and interested, feels safe and respected, and willingly participates for the joy of learning, the task itself is transformed. Schools need to teach teachers to understand the "at-promise" process and respond to student communications as part of gaining student trust in order to get results (Prutting, 1982, V47, p. 123-134; Hull 2006; Ashcroft, 2002).

Fluid Not fixed Learning

Whether by risk-taking with language, or with dramatics, the brain loves art. Art opens the system to new stimuli. The connections move from external stimuli to memory through meaning. The brain is not a fixed system, but can open by listening to itself and/or listening to others, thus building awareness. The mental process seems chaotic because the brain’s processing of stimuli and building pathways is dynamic and spontaneous. Art reflects this type of responsive processing. Metaphorically, the muses put the brain in a conducive state for learning. All students are artists and dancers by nature in that they move, respond, fall, and create through the body as instrument; the body-mind cannot hold wisdom that is heard if we fail to learn to listen, write, read, and speak. When we put the pen to paper, sing in response, or gesture, we are engraving and witnessing learning as an
event. We leave a positive mark or a stain on the brain that informs our lives and builds the capacity to outgrow our struggling.

"By honoring silence and space...we begin to bring balance to our culture and our lives and develop a new rhythm between talk, silence, object, and space. This is essential in mastering the tension and pause in the arts and in the organization of important communication" (Miller, p. 136).

**Topic Four: Brain-Targeted Teaching to Nourish the Brain to Process Faster**

The previous discussion shows that the arts allow humans to make connections (Taylor, 1995). The brain moves information from stimuli to memory and from memory to meaning. The brain is our link between worlds. Words link us to them. Without ongoing supportive or lived experiences, the brain cannot make connections. Literally, figuratively, or physically, and as a result of internal valuing, it will prune and eliminate unimportant memory. Aphasia research reminds us that humans live in a bubble of language (Stroke Connection, 2011). Without words to connect, we resort to signing and signaling to connect. Music can help to build or rebuild neural networks or routes to vocabulary and associative concepts. Reading and
comprehension in academic settings relies on what may come out of arts research relative to "whether there is a sensitive period" for the acquisition of the mental processes involved in the performing arts" (Dana Consortium Report on Arts and Cognition, 2008, Dunbar p. 90). Making connections is part of what gives us access to acquiring content, but more research is expected to look at causality for high interest i.e. motivation, sustained attention, and improved cognition (p. 4, Elements of Art Theory).

Buly and Valencia's research (2002) describes clusters of bad reading behaviors presented by students who are deflected. These present in a toxic mimicry of "automatic word callers, word stumbleurs, slow word callers, struggling word callers, slow and steady comprehenders, and disabled readers." This is evidence of enough misdirected behavior that it is necessary to break their (wiring) spell of distraction and lead them back to better behaviors that work for beginning readers (Dickinson & Neuman, 2006, Handbook of Early Literacy, p. 441, Table 29.3, Comparison of Clusters of Student Reading Behaviors). Such students need mentoring towards the right study scaffolding and in class behaviors. Which art form could help or which specific neural network
formed is still under study by experts (The Dana Consortium Report, 2008, p. vii and p. 4).

The pathways between visual decoding and sound are strengthened through the arts. The arts give children a more equal starting point for succeeding in class by building the gyri resources and the bicameral temporoparietal, left inferior occipitotemporal/fusiform area with the middle and inferior temporal gyri resources, which are critically related to reading fluency (Booth, et al., 2001; Shaywitz, et al., 2002). Robust brain activation supports greater word recognition, decoding words, and reading fluency, due to fast acting responses that link mapping visual perceptions of print onto the phonological and semantic structures of language (Black & Behrmann, 1994: Price, Wise, & Frackwiack, 1996; Simos, et al., 2002; Xu, et al., 2001).

Posner uses neuroimaging to identify brain areas that are active as a person performs certain tasks (Posner, 2009, p. 15). Art empowers these connections. The bulges of the brain (gyri) are the system’s test for accomplishment. The size of the precentral gyrus on the left and the postcentral gyrus on the right reflect the ability in the cortical array to operate the motor sensory areas of the cerebral cortex.
The process of "cracking the language code" (connecting graphemes as visual stimuli to sounds assigned to letters and their meaning) uses processing in both silent and spoken reading tasks. Neuroimaging of Wernicke's area shows active response-ability in age and skill related developmental findings. Progress has a developmental trajectory based on word stimuli and neurobiological signatures. Atypical development can be the result of a lack of stimuli, the wrong stimuli, or processing errors (Handbook of Early Literacy, p. 66-67).

Twenty-first century learning (21st Century Learning) focuses on collaborative processing that is forwarded by bundles of brain cell axons to carry messages that are conceptual, linguistic, mathematical, or loosely and globally described as "making connections" (Frey and Fisher, Springer Science, April 2010). Neuroimaging established that performing arts students take a more linguistic approach to tasks, with increased activation in the left interior frontal gyrus and the left superior frontal gyrus, the area used for generating names in language processing (Dunbar & Nelson, p. 83).

The brain reflects the active development of thought and maintenance of neural pathways by: 1) processing quickly; 2) including the entire body system; 3)
responding to stimuli; 4) using different strategies; 5) rewiring to be more efficient (or when there is a disaster). The brain feeds on experience. It is wired by the distinctions based on patterns. Music promotes access to long-term memories and lyrics quickly even when the brain is partially disabled or events and people are long forgotten. Autistic children, savants, and musicians are now having MRIs showing that different brains are differently-abled. Thus, to be most effective, instruction must be modeled to the individual learner and their particular responses.

Children need skills to master how they interact with a larger world containing both large and small systems. Natural and man-made systems are interactive, changeable, balanced, powerful, complicated, connected, organized, and everywhere. From physics to anthropology, economics to genetics, children need to understand differing domains and disciplines that interact. This demands that basic skills include teaching thinking and media literacy as well as fluency that go beyond syllabic reading to comprehension and even require substantive creativity.
Direct Instruction through Informal Science Experience

Systems thinking can be taught by direct instruction or through experience with, for example, local plants and animals and using mnemonic devices that link verbs, nouns, and concepts through modes of expression, emotional states, pulse, breath, and attention into archival memory by the interconnectedness of musical and linguistic processing and the memory effects of song and movement (Smallwood & Haynes, 2008; Ghosn, 2002; Smallwood, 1991, Figure 1.4 Schematic representation of the elements of a control system, p. 11). Natural cycles easily relate to integrated pedagogy that can use dramatic dance as a function of communicative feedback or message loops (Mead & Bateson, 1973, diagram on first and second order cybernetics) to test for comprehension and science vocabulary gains.
Researchers report that participation in the arts positively influences brain performance. Music, painting, dance, and drama have been cited as essential to academic and emotional development (Franklin, Fernandez, Mosby, & Fernando, 2004). They help reduce stress, improve learning outcomes, enhance motivation, regulate brain chemistry, augment body memory, and rewire neural pathways.

Introducing cognitive skills with language and discovery changes how school is perceived, thus opening new possibilities for these learners that were not perceived before.

Since the brain is viewed as a complex system that changes over time, teacher interaction with students can now include Lorenz’s Butterfly Factor (Sardar & Abrams,
1988, p. 54-55). Supporting the chaos and complexity of the brain implies that teachers try to understand the ambiguous or discordant messages and developments coming from each student. In chaotic terminology, simultaneous thinking about inventions and co-inventions is termed "enablement." Good practice recommends that teachers and parents learn how to deal with creativity rather than discourage it (Kaufman, et al., 2010, p. 380-387).

This "new" teaching asks teachers to support breakthroughs in student work and brain activity. By looking for leaps in productivity instead of constant control, the teacher becomes a vital part of holistic processes built on feedback and sensitive interdependence, with nonlinear developments always kept in view (Sardar, 1998, 2003, p. 122-123; Swales, 1988, Stevens, 1988; Price-Machado, 2001, p. 43-53).

English for Specific Purposes (ESP) sorts language into academic language and vocational language groups. Either way language is grouped, effective vocabulary development is focused on the learner's needs by providing relevant themes and content to the learner. By placing emphasis on each student's inherent talents, interests, aptitudes, and abilities through music, drama, and dance, the proposed curricular approach pares down risk factors,
builds in protective factors, and abates the likelihood of future violence in at-risk groups. In short, the arts require higher order thinking skills, individual and group efforts, and an atmosphere of controlled freedom that teaches responsibility, collaboration, and restraint.

In addition to IQ, another definition of intelligence is the ability to comprehend, understand, and benefit from experience. Wink's (1997, 2011) critical literacy is more accessible when combined with Gardner's (1983) eight kinds of intelligence theory. Through the windows of these intelligences (linguistic, logical-mathematical, body-kinesthetic, spatial, naturalist, interpersonal, intrapersonal, and musical), children build multiple pathways to make meaning from stimuli and content. Active music making can make children smarter (Sheppard, 2005). The genesis of a brain well utilized includes "both parts of the creative act as an instance of learning and the activity" (Guilford, 1950, p. 381).

Brain morphology is prone to changes caused by environmental factors, thus the brain is more malleable than previously imagined. We can replace beliefs by telling new stories, learning about our emotions (emotional intelligence) and bridging experience to build new conceptual resources. The University of Music in
Freiburg found a strong correlation between children’s mental speed and musical ability. The planum temporale brain area is larger in musicians (research in Leipzig listed in Sheppard). The left side of the brain handles pitch, melody, and harmony. (Sheppard, 2005, p. 49, 62). People learn languages more easily and keep their minds active by combining learning styles and being open to new media (Merzenick, 2005; Pues, 2001). The brain’s final decisions on using stimuli are based on the number of cells in the brain, the layout of the neural networks, the density of the networks, and the speed at which brain impulses travel. United Way’s national initiative “Success by age six” (circa 1999-2012) may refer to the effect on the gyri when the brain streamlines its neural processing by weeding out what it is not using. Apparently, “use it or lose it” is a biological imperative. In summary, it’s not how you process, i.e. which of the eight intelligences you use to build this neural network through brain activity, but that you do (Sheppard, 2005, p. 56, 57).

**Neural Networks Spur Achievement**

Music reinforces forming verbal capacity by developing paths in the neural networks. The Wechsler Intelligence Scale (Wechsler, 1991) measures four scores: verbal comprehension, perceptual reasoning, working
memory, and processing speed. Phonological awareness is only one component along with phonological memory, rapid naming, word letter identification, passage comprehension, and reading fluency. Perception, alertness, and anatomical processing are measured in the classroom by professional evaluation and notes that are listed in the school grade level portfolio record. Until or unless further testing proves the well being or Individual Education Plan (IEP) needs of a particular student, building brain resiliency and health through a wide spectrum vocabulary can raise test scores and make school enjoyable through work with phonics, alliteration, cognates, and independent reading.

Caine and Caine (2008) reference the fact that when schools allow student body/brain/mind systems to operate in an integrated, focused, and working together style, schools are “naturally” helping students to learn more effectively.

Stanford researchers (Ben-Shachar, et al., 2007, p. 260) have revisited certain reading assumptions gathered historically in France from the post mortem study of a brain lesion patient, Monsieur C, who had both reading and writing problems called alexia with agraphia. By the end of the nineteenth century, neurologist Jules Dejerine developed a general model of reading pathways.
Dejerine designated the left angular gyrus as the cerebral center for the representation of visual images of letters. His model states that the information of the left visual hemispheric field, represented by the right occipital cortex, normally crosses over to the left hemisphere where it is transferred to the language system. Because of fractional anisotrophy today, researchers observe reduced myelination in certain populations where less efficient axonal signal conduction takes place.

In poor readers the white matter shows a difference in this area's regional development in causal directions perhaps because of reduced exposure to print (p. 260). Clearly, reading relies on processing in multiple regions of the brain, in addition to intact transmission signals between them (Ben-Shachar, et al., 2007, p. 258).

Creativity and the Arts: Joy Accelerates Response Time

Human learning capacities are summarized into three interactive elements: 1) relaxed awareness; 2) orchestrated immersion in complex experience; and 3) active processing (Caine & Caine, 2008, p. 3). Since both physical movement and engagement are essential for certain learners, especially in high AD/HD and at-risk service
groups, dance, music, poetry, and songwriting would help them out (Ping Ho, et al., 2009, 2011).

To quote from Twelve Brain Mind Principles (Caine, et al., 2008) referring to the impact of the federal No Child Left Behind Act,

It is as if educators have to learn to dance at the same time that they are also being told to march in step. In the process, many of them have been robbed of their joy in teaching, which is fueled by laughter, creativity, and confidence. (p. xx)

Also supported in the Kaufman, Beghetto, and Baxter paper "Answer the Unexpected Questions: Exploring the Relationship Between Students Creative Self-Efficacy and Teacher Ratings of Creativity, Creativity and the Arts" (Kaufman et al., 2011), evidence is mounting that for teachers to teach well, they must be able to engage the student’s brain in the way it processes. They must overcome stress and other human factors to make the most out of this precious zone of proximal development time in third grade, by understanding and supporting individual creativity (Wink, 1997; Vygotsky, 1978; 1962).

The brain stem, midbrain, and limbic system are bypassed when students are in a state of relaxed alertness. If children are in a hyper-vigilant state of
stress, their mind states reduce learning. By dancing and singing, the arts/brain learning model bypasses aggression, arousal, terror, and dissociative experiences. Art interrupts this dissociative continuum. Even children who are quiet and only do what they are told to do and work hard to protect their anonymity are impacted by mind states. The Caine Learning Center says: "Meaningful learning includes our emotions and is intrinsically rewarding." This can result in graduation rates that Congress and our legislators want to achieve.

At the core of human meaning is a sense of relatedness that children get with their whole body and it is perceivable from the outside by the instructor. Felt meaning, novelty, dissonance, and valuing are all parts of making sense. By presenting only in a visual learning style that does not allow for multiple intelligences or student engagement in meaning, schools leave social learners, auditory-kinesthetic, naturalistic learners, and many other kinds of learners behind. No wonder some classroom teachers send so many children to the principal for bench sitting.

Various research teams (Kandel 1996, 2005; Levine, 1998; Selye 1936, 1956, 1974) have demonstrated that humans reach toward what they want in learning unless they
are under stress. When caught in an automatic response of survival, students switch their mind state to fight, cause problems, play dead, or tune out.

Instead of choosing methods that challenge students, schools appear to be encouraging some students to tune out at the ages when they have the optimal neuronal learning opportunities. Researchers have found that there are "almost no differences in early intelligence measurements among children prior to six months of age including at-risk student populations. The key to language lies in the development of what begins in infancy as executive brain functions that govern cognition and emotional maturity. Differences after that six month period are most measurable when language develops around the age of two" (Sternberg & Grigorenko, 2001).

The major factor in determining student differences in intelligence and achievement in school is the mastery of language (Diamond & Hobson, 1998, p. 164; Caine, et al., 2008). Without useful experience and synaptic integration of content, the brain prunes what it does not need. According to Skutnabb-Kangas, schools are not allowing children to construct meaning from their own resident language. She believes that "children need to learn and that they don't learn what they don't
understand" (Wink, 1997, p. 72-78). The gap in achievement described sociologically (Fine, 1991) results from elementary schools processes that "don't coincide with the natural impulses of children and their favorite activities" (de Marrais & Le Compte, 1999, p. 128-129).

When the brain learns and constructs thought (semantically) out of sounds, print, processing, and archiving, our senses and response time are all part of another kind of hierarchy. Teachers, administrators, and students can effectively utilize a systems model that includes resiliency theory, pragmatics, memory, the papez circuit, thalamus, and the amygdala. Successful classroom examples include Rafe Esquith, LAUSD award-winning elementary school teacher, (Esquith, 2007) who elicits new language arts and behavioral outcomes from his Hobarth School Shakespeareans, using music, poetry, and performance as well as a dynamic scaffolding of a safe homeroom, core academics, and music training. He uses the musical arts and values to enhance Vygotsky's Zone of Proximal Development, increasing a sense of positive stimulation in homeroom activities and encouraging academic achievement and student locus of control (Wink, 1997, p. 119).
Health rhythms researcher, Dr. Bittman and cohorts describe a terrain of recreational music making that evokes positive self-disclosure, reduction of negative behaviors related to impulsiveness, harmonious working together, and increased psycho-social self-control (2009). In the National Institute for Literacy’s 21st Century Learner model and the Partnership for 21st Skills Framework, national educational demonstration prototypes and research links meaning making and self-expression through reading with involvement across several domain strands. Art portfolio activities tie language and experience to formal writing and vocabulary when individual students write narratives and learn from analyzing their own work projects (2009).

Educators like Baron (Guitars in the Classroom), Wish (Little Kids Rock), Morehouse (Music Means Me), Reitz (Journey of Sir Douglas Fir), and others link children, teachers, and music to evoke the best performance of students. They teach without teaching through drumming, guitar, singing, rock and roll, musical theater, jazz, and language combined with rhythm. Following a tradition of music in the classroom from Pete Seeger and Ella Jenkins
to Alsop's *Trout Fishing in America*, the teaching song supports teachers integrating standards based protocols that reflect state local education agency requirements and the National Music Education Association benchmarks. Great examples are "Bring Back the Bat," "Habitat," "The Wheel of the Water," and "River Song" in Alfred Music's *Green Songbook* (Baron, 2011).

Caine, Caine, and Crowell (1999) talk about including all sensory styles in education, naming the Adventurer (multisensory), the Director (sense of sound dominates), the Evaluator (sense of vision dominates), and the Nurturer (emotions dominate). Once teachers can understand and observe brain function, they can learn to charm their students by becoming facilitators and paying attention to the learning style of each student. The outcomes could alter education statistics significantly. School administrators need to learn how to build small learning communities that allow for different learning styles and strategies. Encouraging children to enter a singing state safely in a school day, or allowing a more collaborative and creative instructional style, invites another level of performance success by embracing the brain's anatomical process and its developmental and evolutionary needs. Nurturing adds to the behavioral safety of at risk
children; risk factors are lowered due to their ability to receive social skills from parents or adults, adding to their chances to make it to full maturity. (Neufeld, 2006).

Music Supports Language Development and Comprehension

Comprehension can be Spurred by Building Plasticity. No matter what the subject, the process of songwriting with singing can supplement what is missing in daily instruction by adding to the process of reading, decoding, blending, practice, and vocabulary. Offering the practice of language arts skills in a context of fun, exploration, and adventure, points students toward mastery, but makes no promises and does not blame. It sparks enthusiasm and challenges the group to reach together toward the goal.

No longer about rote learning, lists, or facts, the arts process provides practice, performance, and meaning making across disciplines. Mature play (Hiteshew, 2006; Moats, 2001, p. 21) shows that basic skill deficiencies, such as failure to recognize printed words, arise because of an inability to map (wire neurons to distinguish relationships such as matching) speech sounds to letter symbols, along with a lack of motivation. This can be positively impacted when children trust their impetus to
play and have good instructional role models that strengthen a sense of success. By being gentler about mistakes on the way to achievement, children go for the right answer—and it is more memorable.

**The Role of Dance—New Pedagogic Understandings**

From anthropologist Sachs (1937) to Sarai-Clark (1989, p. 134), dance connotes a tension/release path (a mime for signaling experience expressively) for symbolizing feelings, emotions, and experiences common to all humans. Dance utilizes the sensory array to outpicture input from listening, learning, and moving. As another voice, it signs the natural state and consequences of growing up, and this work emerges from the risk taking of immediate performance. In many cultures, dancing in everyday social occasions or special rituals or festivities, offers healing, pleasure to others, and physical development as well as intellectual and aesthetic gratification. Here musical and dramatic art serves as a gateway to self and others and offers tremendous benefits to children.

Dance becomes the medium to expand beyond a static state into one buzzing with possibilities. It is the spontaneous response to conditions that signal our homeostatic status, i.e. brain on and responding, or brain
off and filtering out input. Children use dance to mirror, compose, and respond. This integer describes praxis and socio-learning in call and response in a telegraphic/iconic manner that is cohesive with the academic results required in formal standards for all learners. Just as early vocabulary is an important predictor of eventual success in reading (Snow, Burns, & Griffin, 1998; NICHD, 2000) by listening, telling stories, and carrying stories, even children who can not yet spell or write can invent spelling, gesture to tell a tale. New dancers invent and telegraph to others in order to relate experience and learn about language. To quote the Long Beach Unified School District Research, Planning, and Evaluation study from Aguila and Guleck (2006), ideas from Williams and Hetland Reviewing Education and the Arts Project (2000), “dance engages children, gives them kinesthetic skills, helps them feel good about themselves, supports organizational skills, fosters creativity, supports global thinking, and multicultural understanding and even improves reading and math skills” (Bradley, 2001). Gesture and decisions about mirroring and pacing teach important social skills and how to phrase, select a theme, and communicate paralleling future decisions in
choosing words, framing a subject and in critical thinking that can in the future become self-expression on the page. Make believe builds connections to nature and vocabulary.

The proposed curriculum involves musical theater that uses this personal form of pleasure, reading and making sounds on a script either with a printed lyric sheet, reading a streaming lyric in time and with a melody, or reading cold and playing a character as an equation with unexpected variables and an optimal bottom line. This kind of musical make-believe encourages students and teachers to imagine, create, and implement subject matter in ways that make their study of the world thick with meaning. They can solve the problem different ways, but the class activity is aimed at the goal.

Music in this context is important (Wolf & Blaick, 1999). It reinforces reading and class code rules. Children gather knowledge like a snowball rolling down hill and gather input from several streams: seeing the information, hearing the spontaneous interplay, making live in time connections, and taking a turn. Art secondarily impacts behavior with themes, characters, and social imperatives. Whole language has a contribution throughout culture and history, drama and literature, as
stories we love demonstrate shared values, like defending children or giving to the poor. Although only figments of imagination, characters such as Elmo and Horton, Big Bird and Jo Jo, Cindy Who and the Grinch, all teach through images. They inspire generation after generation around the world with the possibility of striving and making a contribution to others.

Musical theater has taken on larger themes like racism, greed, intermarriage, and parenthood. Words and music have the capacity to say things that inspire students for a lifetime. Poetry, lyrics, rhyme, pulse, thought, melody, and breath inform and entertain audiences. The discovery of one’s voice by reading an author through practice, whether Kenneth Grahame, Sojourner Truth, Martin Luther King, or Mother Goose, gives readers a mentoring process in the ripples that go out from analyzing what was read. Whether in the writings of Ann Frank, Langston Hughes, or ee cummings, or singing lyrics from shows of Stephen Schwartz, Alan Menken, or Randy Newman, or hit songs of troubadours/performers like Michael Jackson, Joni Mitchell, or Nina Simone, plus play party songs and rhymes, all lead to hearing and reading phrases. Singing in the patterns of conversational and sophisticated English from “Amazing Grace” to “Put On a
Happy Face" gives children a doorway into language that can help them in other contexts.

Music becomes a provocative way to study through another's voice a nuanced and empathetic account of life. Singing touches the place where we remember people, receive cultural messages, and study history reinforced through the composer/lyricist's expression. This model of language performance and singing enunciation is an active group participation process, driven by student choice in the moment, which is not about getting it right. It is the antithesis of many present classroom approaches; in this after-school setting, children have the opportunity to develop. They have the reinforcement to rehearse and learn from others and get it right the next time. According to the English subject matter requirements in "Part I: Content Domains for Subject Matter Understanding and Skill in English," and "Domain 1, Literature and Textual Analysis," (California Commission on Teacher Credentialing, 2002) teachers must master the English Language Arts Content Standards and the Reading and Language Arts Framework for California Public Schools K-12 (1999) and be enthusiastic readers and writers who know how to apply effective reading strategies and compose thoughtful, well crafted responses to literary and
non-literary texts. For children this means receiving a positive mentor in the use of English in their lessons. But so much is expected of teachers that students do not get the intuitive, personal, and supportive practice time they might get at home, or in school to take risks, and learn how they could do better in academic activities.

Musical theater is conducive and remedial in involving learners in composition, creativity, and English language development immersion. By working through praxis with peer-to-peer discoveries, children participate in student-centered experiential pods that allow them to make their own immediate difference in how school is viewed by changing the sophistication of vocabulary and allowing playful practice. Making mistakes and solving problems as they occur enables reading for meaning to become a natural skill (Moats, 2001, p. 69, 74, 112, 113; Gazzaniga, 2008, p. 58-59).

How musical linguistics enhances vocabulary gains

This paper has looked at the brain as organizer, processor, storage unit, and thought generator; now it will look at ongoing research elucidating education’s understanding of grammar and the manipulation of language (rules of linguistics, semiotics, and sign).
Linguistics starts with parts of speech that have eight classes: nouns, verbs, articles, pronouns, prepositions, conjunctions, adverbs, and participles. The rules that transform meaning, usage, and sound of words to implicate meaning, have either a European (Greco-Latin) or an Indian tradition. Aristotle in 384-322 BCE divided a sentence into two parts with a subject and a predicate. Linguistic analysis was created by Panini in the fifth century BCE in the Astadhayayi and began a long Indian tradition of phonological analysis and grammar rules (Trask & Mayblin, 2000). Same as paper and book?

Despite individual student barriers to learning, Von Humboldt proposed in the 1800s that every language has an internal form that determines its outer form and is a reflection of its speakers' minds. Saussaure lectured in the twentieth century that, "a linguistic sign is not a link between a thing and a name, but between a concept and a sound pattern. The sound pattern is not actually a sound, for a sound is physical vibration. A sound pattern is the hearer's psychological impression of a sound" (paraphrased from Saussure's Third Course of Lectures on General Linguistics, year?, p. 16-17). Making meaning through semantic frames via musical phrasing includes using larger chunks of language that, with low English
proficient learners, can make schoolwork more interesting and academic writing more achievable. It can import more language in saturated time using poetry’s ability to stack meaning, and prosody’s ability to depict or describe sensate experience or use synesthesia. Songs can thereby develop Saussaure’s individual language faculty, and immerse the learner in an exploratory use by the individual.

Songwriting as a method for English language development pedagogy uses words to improve student sensitivity to grammar and its applications. Semiotic structures can be used to broaden and deepen student interest, vocabulary retention, and motivation (i.e. increase student involvement). Language arts play a role in delivering solid learning objectives via sound packets to the most endangered learners. Encoding in the brain and white matter takes place in the process of building cognitive relay mapping in chemical and fibrous networks that build the cortical gyrus; it is here that Saussaure (Linguistics), Korzybsky (General Semantics), and Lakoff (Linguistic Framing) meet. In reverse, “the map is not the territory” gives the author reason to suggest that singing reinforces constructs and vocabulary that can raise academic outcomes and promote social wellbeing. If
children are hardened against school, it is up to educators to enchant them with a new and inspiring story—shown by the power of words.

California’s Board of Education recognizes four visual and performing arts educational components in arts in education standards: artistic perception, creative expression, historical and cultural context, and aesthetic valuing. Children build these higher order distinctions and capacities through experience, sign, symbol, judgment, and application. The arts domains, strands, and substrands make connections with core subjects while honoring differing student learning styles. This gives children time to reflect, write, consider, explore, and apply their own understanding with others and on their own. Well-designed arts programs offer a salvo for boring and rigid environments that lead to under achievement and discipline problems in certain learner populations (Respress & Lutfi, 2006, Dickinson, 2002). When children can safely express what they know, where they are, and how they say it, they can learn other ways to communicate that can be more effective once they express where they are.

If the structure of our language, to some extent, determines the way we perceive the world (Sapir-Whorf, *Introducing Linguistics*, 1957, p. 30-31; L. Brodotsky,
different cultures and languages perceive the world differently than English speakers. Add to this that Skinner was wrong to think that a child is pushed towards better adult speech only by imitation and reinforcement, but, as Chomsky, (Trask, p. 115-119) exposed, it is better to have children construct rules and make language. As in the Broadway show, Seussical, the Cat in the Hat explains it like this:

I can see that you’ve got quite a mind for your age! Why, one Think and you dragged me right onto the stage! Now I’m here, there is no telling what may ensue—With a Cat such as me, and a Thinker like you!

(Ahrens & Flaherty, 2000)

With a more complex and individuated narrative coursework in a multi-tiered arts program, student activity can give a new life to students who have not responded to current instructional policies and practices. Singing and reading “thinks” like Seussical can make school more interesting and class work come alive. Student motivation might have a voice like this: “If I can fashion my world from language, comedy, spoken word, or music and be heard, I can believe that school might be more meaningful than I’ve given it credit for.”
[The arts are] a basic and central medium of human communication and understanding. [Moreover], they are how we talk to each other, as well as the language of civilizations (Taylor, 1995). All of the arts depend upon the use of the human’s most exquisite capacity: judgment. They are the fundamental resources through which the world is viewed, meaning is created, and the mind is developed... The arts have the capacity to reach the perceptual, intellectual, cultural and spiritual dimensions of the human experience. (Eisner, 1994) [Through the arts], children develop different kinds of mental skills and acquired attitudes towards the world (Eisner, 1995, p. 114-115).

Language is an instinctual neurobiological process. It is acquired in stages. Musical theater and dialogic reading allows children to “babble,” “invent,” and “dance” their way into vocabulary, bridging from small phrases to whole sentences and from telegraphic and private speech to public self expression using contemporary phrasing. Combining reading with group and individual activities allows children to perform, learn from their peers, and to take risks in a spirited way. By combining pragmatics with arts based language practice, integrating risk-taking
creativity with action performance, the proposed curriculum concept will present children with many development opportunities.

Rhymed speech and mature play can be a catching-up mechanism that builds proficiency and fluency through student practice and accelerant access to new constructs supported by teacher appreciation and new vocabulary clusters. Although not a replacement for student Individual Education Plan (IEP) accommodations, health testing, or teacher training in learning styles or delivery, Phonological Awareness Development (PAD) has remedial applications. “Individual differences in the anatomy and physiology of the magnocellular processing stream have been associated with reading skills” (Ben-Shachar, et al., 2007). Teachers can learn what turns their students on and be responsive and more responsible to receiving these communications.

Approach to the Musical Linguistics Curriculum

Musical Linguistics is passion-based learning. As described by Bateson (1972), a metalogue provides a feedback loop in the classroom or a system where a dialogue or monologue becomes itself an example of its own theme or topic. If “Music has Charms to sooth a savage Breast,” (Congreve, The Mourning Bride, 1697) this
describes the metalogue where arts in education is clarioned by what this kind of small learning community classroom looks, sounds, and feels like. As a metalogue, it signs passion and acceptance. It is noisy, chaotic, and cohesive, it can also be used to cool down hyperactivity as well as bring up attention and mood. Collaboration and breakthroughs are part of the context. As a metalogue for both teacher and student, arts in education can help atypical students to stay on track or keep up with the class pacing and the other students. Using Carroll’s (1963) theory applied in lower grades, if children are given enough time beyond the “time on task” and testing, children will build language. By building familiarity with small sound units, they will catch up in the process of singing to read and cantillation (Werner, 1989; Hawkins, 1993; Ashcroft, 2008).

Arts in education can be useful in dealing with learning disorders or particular needs using music and creativity in order to help children build their own classroom survival adaptations on top of existing formal coursework schemas. This allows children to be autodidactic in order to leap ahead. It supports teachers to allow for differing learning styles and cultures and includes a broader spectrum of learners. It communicates
from its torrent of sounds and movement: involvement, engaged activity, cooperation, and discovery just like the curtain of sound in a natural habitat.

As a concept, arts in education is a sign of the times, a return to our natural state of social learning and a leap forward to expanded understanding. By fusing procedure, protocol, and locus of control, the arts give children a representational vehicle for exploring voiced and unvoiced thought. The arts make a way where there was none. By allowing for brain differences and supporting synaptic solutions that involve processing time, previous knowledge, and brain building (mapping new pathways), the arts immerse children in enriched settings with supportive facilitation. This reinforces language acquisition. By respecting the "no" to direct instruction and turning it into "know," children are able to redirect chaotic behavior and transform it to active learning using neocortical dynamics (Caine & Caine, 1979, 1990, 1994; Gardner, 1991).

When the student is fulfilled and interested, feels safe and respected, and willingly participates for the joy of learning, the task itself is transformed. Schools need to teach teachers to understand the "at-promise" process and respond to student communications as part of gaining
Conclusions and Summary

Musical Linguistics is a theoretical domain comprised of applying music for use 1) as a reading development and vocabulary building process; 2) as an empowerment tool; 3) as a personal development resource; and 4) as a bridge to expand student knowledge. It allows learners to learn about language and reading supporting formal teaching. Based on documented findings, participation in the arts plays a vital role in influencing brain development. Music, painting, dance, and drama are cited as essentials in academic and emotional development. They help to reduce stress, improve learning, enhance intrinsic motivation, regulate brain chemistry, augment body memory, and rewire neural pathways. (Dana Foundation, 2009) Broad literature review shows the arts as central to how humans neurologically process and learn.

A broader definition of learning modalities is embraced in Musical Linguistics. Both resiliency and plasticity are modeled via arts integration, which reinforces an inborn ability of humans to learn language quickly. Genetically in place and functioning in healthy
human offspring (Piaget, 1952, 1962), Eisner’s (year?) arts in education can embrace all learning styles. Children who fail to achieve in school may not respond to the current visual method of teaching (direct instruction) or teaching to the test.

Arts in Education standards in California imply that the arts speed student comprehension by increasing comprehension through direct experience of relationships (Taylor, CDE VAPA, 1995). Improving cognition and response time in differently-abled learners requires individuated instruction and brain puzzles i.e. play and challenges instead of repeating high frequency words. "Because reading relies on neural systems spread across the brain.... skilled reading requires mapping of visual text to sound and meaning." (Ben-Shachar, et al., 2007, p. 258).

Enrichment that includes the arts will build important neural bundles necessary for grade level improvement. "Arts integration... will increase knowledge of a general subject area while concurrently fostering a greater understanding and appreciation of the fine and performing arts" (Winslow, 1939).

Musical Linguistics, through relaxed awareness and student engagement, helps students process ideas faster, which amplifies teacher/student rapport and magnifies
student performance. Better behavior, improved memory, faster processing, sharpened focus, and quicker response time also restores a sense of order, meaning, and confidence to students who must trust themselves, as well as their teachers, and their environment to improve. In the process of a Musical Linguistics intervention, the student’s perception of the school climate changes from hostile, cold, unresponsive and punishing to fun, supportive, and nourishing.

Too many students are signaling that they are not able to respond to the present instructional model. Testing shows that more than thirty percent of our children are failing to succeed in core subjects compared to their peers. Including school readiness training through an application of dynamic brain research would affordably utilize out of school time to bridge the gap for participating students, special or not, especially far below and below basic readers.

The Musical Linguistics project expects to demonstrate that an arts integration science approach, delivered sequentially after-school, could give atypical learners the support they require, and serve the fiscal need of districts who are mandated to raise student test scores. It could save lives, deliver new academic
outcomes, and aid program improvement schools by providing an immediately applicable and targeted response. The goal of this project is to affordably remediate poor reading results through phonemic awareness and vocabulary building inventions. By raising student cooperation in the pursuit of English Language Arts and Reading achievement, results will improve. Through better comprehension and meaning making, our children will make better use of school and the dollars we spend on them.
CHAPTER THREE
RESEARCH DESIGN

Introduction to the Water Buddy Program

As a music and arts reading and language arts intervention program, Water Buddy adds integrative education practices to existing tutoring and childcare practices delivered after school. It works through 'teaching without teaching' using a fabric of individual and group practices that inspire “mature play” (Hiteshew, 2006, Smallwood, 2008) when delivered as an academic English Language Arts program. The characteristics amplified in this project are:

- Experimentation with language, i.e. voice, storytelling, and meaning making, to support students to explore reading with a goal of greater comprehension and literacy (Selke, 2006; Gardner, 1983).
- Involving young learners in significant patterns of mature play that resets their student academic and social success capacity through brain development and arts integration. Building linguistic structure competencies in order to
become school ready (Smallwood, 2008; Hiteshew, 2006).

- Encouraging students to find their own voices, participate, and write as a fun form of entrainment into developing "both skills and capacities" (form neuronal pathways) modeled in a warm learning climate (Katz, 1988).

Music instruction, in conjunction with other arts, can be described as framing language to evoke the senses with emotion in tandem with words and symbols. It is theorized that when purposed for improving student outcomes and preparing them for academic success, these activities can complement the recent neurologically based learning model in schools by delivering linguistic constructs to atypical or at-risk learners. Third graders will engage in complex instructional interventions, such as writing lyrics, whole song segments, and crafting speech to specific melodies and rhythmic phrasing. In the process of doing research, making word substitutions, scanning, rhyming, and sorting vocabulary in order to tell stories, children will build the capacity to read, listen, speak, hear, risk, enunciate, and write. Tied into the emergence of informal science and the propensity for building language in the brain, Water Buddy is an
after-school Musical Linguistics pilot proposed as a
demonstration arts integration program that functions as
Science, Technology, Engineering, and Math (STEM)
vocabulary building and elementary grade level reading
remediation intervention.

Research Methodology:

Research Design

Based on the research foundations of chapter two, a
sample project was created using Musical Linguistics as an
after-school support strategy for low performing students.
An introduction was included that explained the
fundamentals of this approach as well as sample lessons
for Water Buddy. Six professionals evaluated the project.
The methodology is described below.

The review questions for the proposed pilot lesson
plans were chosen using common sense starting points for
any curriculum to be examined by a school district,
administrator, parent, or teacher. The intent was to find
out from the reviewers the appropriateness of curriculum
for the age group and would it meet the needs of the
children to be served. They were: 1) Is the project
content in compliance with state standards, goals, and
needs of the participants, families, school district, or
community?; 2) Is it grade appropriate?; 3) Is it relevant, rigorous, and reliable, evidence-based, and competitive?; 4) Do experienced educators think that Water Buddy would serve children and build language arts and reading skills?; 5) Would educators in varying fields perceive this content and approach as viable?; 6) Would musical theater and this new concept of Musical Linguistics be supported as a viable model for learning?

The questionnaire leaves room for commentary.

A Likert scale was chosen to assess the potential value of the program in a clear and immediate manner with room for written comments to allow for each professional to respond quickly, easily, with as much or as little detail as desired. Reviewers were asked to respond to the following statements:
Table 1. Reviewers Statement

<table>
<thead>
<tr>
<th>Statement</th>
<th>Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The curriculum is relevant to addressing the linguistic needs of third grade students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
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<tr>
<td>2. The curriculum is grounded in and supported by established theories of learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3. The curriculum guide is well constructed in terms of goals, objectives, activities, and evaluation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
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</tr>
<tr>
<td>4. The learning activities and content are engaging to third grade students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>5. The learning activities and content are appropriate for third grade students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6. The curriculum approach is one I would recommend to others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
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<tr>
<td>7. Additional suggestions for improving the curriculum project:</td>
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</table>

Reviewer Selection Process

The research objective was to obtain feedback from different points of view to assess the appropriateness and potential effectiveness of this approach. The results will
also be used to improve the curriculum before implementation.

The following reviewers were selected to examine the curriculum and provide feedback via the above questionnaire:

a) The director of a private family Jewish enrichment center and a small synagogue’s education programs.

b) One K-12 school instructor who works with media and environmental education.

c) One K-12 school instructor who develops musical curriculum for a musical nonprofit and has worked with several music curricula in the course of her career.

d) An after-school arts council program evaluator.

e) The past director of a private Montessori School and director of a newly forming school district charter school.

f) An elementary school principal.

Public and private schools use different approaches to child reading gains to forward success. Arts councils fund after-school enrichment programs but their participating schools may or may not use these services and integrate them in their state sanctioned English programs.
Because of this a spectrum of specialists were chosen. The reviewers were chosen because they are familiar with the abilities and needs of typical third grade students or know about arts in education. In addition, many of them are familiar with the special needs of non-native learners, atypical learners, at-risk, special needs, ESL, dual language, autistic, and other children who process differently than the norm. One of the reviewers leads a K-12 public school coming out of Program Improvement under No Child Left Behind. The individuals, chosen for the questionnaire, are long time career educators with experience in creating programs in enrichment, with the environment, and positive school climate. They are familiar with how the arts impact their existing and past students and what they are doing to help atypical students.

Materials provided to reviewers

After responding positively to an introductory letter with an invitation to participate, each reviewer received a package with the following elements:

- Cover letter
- Introduction to Musical Linguistics
• Short summary of the goals of the proposed third grade Water Buddy curriculum approach
• Theoretical background of the project
• Curriculum materials for the first three classes and examples of handouts
• The questionnaire (questions and comments on one sheet)

These materials provided the reviewers with the necessary background to judge the intent of this approach and the quality of the lessons.

The topics of the three lesson plans were: habitats, danger, and community. The three handouts were: the Bunce Language-Rich Fidelity chart from the Pence article, a narrative and literary language chart tree, and a lyric sheet for "The Rainbow Song" which included simple Dolch (high frequency) words and weather constructs. Pictures in the lesson plans and descriptions showed what a page of a large format Lonigan type text would be and to get the idea that the program would include the music tutor with speakers, rich environments with instruments, drums, streaming lyrics, musical scaffolding and other kinds of visual aids.
The idea was to have enough of the proposed curriculum to introduce the theory, construct, purpose, and intended outcome. The hope was to show enough of the content and theory to differentiate the process from the "normal" modernist school day. The set up and break down with images also sets a scene for a new paradigm in the students' school experience, as modeled in the Bunce chart.

The materials were uploaded on www.yousendit.com and also made into PDF files and provided to 11 potential reviewers through a combination of email and hand delivery. (See Appendix C for complete package and a sample of the Likert scale answers that came back.)
CHAPTER FOUR
RESEARCH RESULTS AND ANALYSIS

Data collected and analysis

This chapter reports and analyzes the feedback provided by the reviewers on the content and effectiveness of the proposed curriculum. Overall, the reviewers were in agreement that this program had value for third grade students.

Comments were received from the following reviewers and analyzed by letters from a to f:

a) The director of a private family Jewish enrichment center and a small synagogue's education programs.

b) One K-12 school instructor who works with media and environmental education.

c) One K-12 school instructor who develops musical curriculum for a musical nonprofit and has worked with several music curricula in the course of her career.

d) An after-school arts council program evaluator.

e) The past director of a private Montessori School and director of a newly forming school district charter school.
f) An elementary school principal.

Questionnaire scores

Six responses were received on time and assigned letters a to f to keep the reviewers anonymous. Scores on the Likert scale were entered into an Excel spreadsheet reproduced below.

Table 2. Answer to Questions

<table>
<thead>
<tr>
<th>Reviewer</th>
<th>Questions</th>
<th>Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>5 5 5 5 5 5</td>
<td>5.0</td>
</tr>
<tr>
<td>b.</td>
<td>5 5 3 5 5 4</td>
<td>4</td>
</tr>
<tr>
<td>c.</td>
<td>5 5 5 5 5 5</td>
<td>5.0</td>
</tr>
<tr>
<td>d.</td>
<td>5 5 5 4 4 5</td>
<td>4.8</td>
</tr>
<tr>
<td>e.</td>
<td>5 5 5 5 5 5</td>
<td>5.0</td>
</tr>
<tr>
<td>f.</td>
<td>5 5 5 5 5 5</td>
<td>5.0</td>
</tr>
<tr>
<td>Averages</td>
<td><strong>5.0 5.0 4.8 4.8 4.8 4.8</strong></td>
<td><strong>Overall Average: 4.86</strong></td>
</tr>
</tbody>
</table>

All comments received (some based on oral interviews) are included in Appendix C.
Summary of Results

The reviewers were very positive. Most of the scores were five (the highest rating). Four of the six reviewers scored all questions at a five rating. Only one three rating for question three and two four ratings on questions four and five were received.

To review what was found in the Likert scale responses by question:

Question one: All six reviewers said that the curriculum is relevant to addressing the linguistic needs of third grade students.

Question two: All six reviewers said that the curriculum is grounded in and supported by established theories of learning.

Question three: Five of the six thought the curriculum is very well constructed in terms of goals, objectives, activities, and evaluation; only one reviewer rated this a three instead of a five.

Question four: Five of the six thought the learning activities and content are very engaging to third grade students; only one reviewer rated this at a four.

Question five: Five of the six thought the learning activities and content are very appropriate for third
graders, rating this a five; only one reviewer rated this at a four.

Question 6: Five of the six thought that the approach was one that they would highly recommend to others rating this at a five; only one reviewer rated this at a four.

Discussion of results

The comments were very supportive (see Appendix C for full text of all comments). A few made excellent suggestions that could aid implementation. The bottom line is that the reviewers thought the program should be implemented and it would definitely benefit the students, if the teachers were sufficiently trained to teach it well.

Based on the scores, the projected curriculum has merit, although it is not finished or quite polished enough at this time for immediate implementation. Reviewers suggested slowing the pacing to allow more time for student reflection, as well as for transitions from one activity to the next.

Two of the career classroom teachers broke down their comments into specifics that would help other teachers learn how to teach these modules. They also provided
helpful suggestions for daily setup, logistics, and delivery focusing on rotating the visual background.

Both the Montessori specialist, who had run her own school before beginning to create a Montessori charter school, and the Jewish educational director, who runs a small family enrichment program, gave the project all fives, which strengthens the validity of this approach.

The principal of an elementary school, who also gave a perfect score, directs a public school that has worked training teachers in conjunction with Pepperdine University. This school population is a majority of dual language or Spanish speakers. The school has built its own small enriched learning community with a garden, library, and reading coaches, but still has a population of at-risk learners. Even with existing arts instruction and LA's Better Educated Students for Tomorrow (BEST) after-school programming, its principal continues to be open to helping its low income, overweight, and failing to thrive students with best practices tested or untested.

One reviewer commented that "Students will enjoy the choral activities, the drumming, the story enactments, play acting, singing, which will all reinforce the acquisition of spoken language."
The same reviewer suggested, "Daily changes to the classroom displays are not necessary. Set the stage to support the theme, then add an element or two daily for the duration of the unit. This will allow connectivity to the lessons from the day before. It will also provide a memory reference for the writing reference for the writing activity at the end of the week."

A curriculum developer suggested preparation of a video to provide teachers with ways to understand and apply the pedagogical terms and enrichment processes. Videos would enable them to see and study the manner in which these classes are delivered, paced, and implemented, so they could do it themselves.

Reinforcement for the relevance of the theory presented in chapters one to three is shown by the fact that two reviewers volunteered comments on question two: "The work is supported by Gardner’s multiple intelligences theory." One added, "Activities in the curriculum support Gardner’s multiple intelligences and Vygotsky’s constructivist theories of learning." These comments indicate that the reviewers had given the material much thought to make such scholarly analogies.
Analysis of Results

All of the reviewers confirmed that the program was linguistically captivating for third graders. Since the goal is linguistic and cognitive improvement for children who have a hard time focusing or being engaged in traditional learning, this is promising. As implied in the approach of Singable Books, the combined benefits of children's literature, singing, and English language and literacy acquisition were well within these educators' sense of involving children in what they are about to learn.

All reviewers agreed that the material was grounded in and supported by established theories of learning, which means these educators are supportive of the approach of using individual and group exercises to improve early language arts development.

One reviewer commented that the activities were too compressed. In fact, the reviewer said, "Each lesson will take much longer to complete than the time allotted. I suggest one week for each lesson, rather than one day." This was helpful commentary, implying that it could help students absorb the lesson better by using a slower pace.

Analysis: This response also could mean that some classroom teachers might look at the program from their
point of view and not see it as a newly forming, postmodern program presented by artist-educators. Note that the materials provided to the reviewers may not have been clear enough to show the intention of the writer that the facilitator/arts instructor would be working with open-ended choices, including the ability to repeat a section, or slow down the timeline in order to address what is known and unknown by the learners and to pace the pauses, pitches, rate, emphasis, and junctures according to the need of the students and their ability to absorb the material.

Perhaps there needs to be additional information covering all three possibilities: 1) creating clearer explanations of the program; 2) adapting a classroom teacher module to embody this innovative approach; 3) clarifying the differences between the goals and objectives of the after-school process so that teachers could see, understand, and believe it empowers their goals for their underachievers or atypical learners. In the future, telephone interviews would clarify the reviewers' reasoning on some points.

Two of the questions were scored at a four by the arts in education grants officer, stating it would be "hard to tell what would be engaging to this age group
without some formal (maybe) developmental chart that indicated this age group’s usual developmental activity likes and dislikes." The implication is that it would be helpful to include a developmental chart and show how the activities and content are appropriate for third grade students.

Analysis: In fact, the curriculum was designed using several state reports to choose what content to put into classes, based on third grade materials. Using the state’s Ecology and Environment Initiative (EEI) word wall; information from the Biome; Science, Technology, Engineering, and Mathematics (STEM); and science/social studies/history standards dedicated to third graders or below, the lesson plans were designed using reading, listening, writing, and speaking strategies along with other English Language Arts Content Standards (December, 1997) for third grade or lower since some in third grade are still at grade one to two levels.

All the reviewers recommended the program, and some had very helpful suggestions, including, "Daily changes to the classroom displays are not necessary. Set the stage to support the theme: then add an element or two daily for the duration of the unit. This will allow connectivity to the lessons from the day before. It will also provide a
memory reference for the writing activity at the end of the week."

Analysis: This comment is interesting because the program is designed for a classroom that is used for regular classes during the school day, thus the need to set up and break down for each session. The comment could mean that this program should be made available during the regular school day or the reviewer believed that the instructor would need to address what the children know and don’t know and slow down to accommodate the learner’s needs.

Another comment was, "Slow down the pace. Allow time for human interaction and transitions between activities."

Analysis: In the proposed approach, the technique is to use a rapid pace to keep the rate of information interesting and active, but the reviewer’s points should be considered to make the material more palatable and effective with the students. This opens up the choices of expanding the days or the duration of the program, or cutting out some of the proposed activities for each lesson.

Another reviewer said, "Children need time to think before they write. Write after all other activities have been completed as a reflection of what they learned all
week. Teacher needs to circulate around the room to help with the writing process."

Analysis: Perhaps the reviewer’s experience is that in a normal classroom writing is always done at the end of the program, which is something to consider in future revisions.

Another comment was, "A five rating with reservations: As a teacher I find the plan hard to visualize and follow. There are many activities and terms used that I am not familiar with. I would need a video overview of a class or an in-person observation of a class session in order to replicate this myself in a classroom of children.

"Additional suggestions for improving the curriculum project: spell out the activities in detail at least once, the first time that type of activity appears in a lesson plan. In subsequent plans, it would only be necessary to spell out activities that are new. As an old school teacher, I recognize the validity of these types of activities, but I would not be able to conduct a class based on this outline, as there is too much vocabulary used that I cannot understand. What does this look like and sound like when students are engaged in it? What does the teacher do? How is it modeled? What are the students
doing? A video of a class doing the specific activity would make it abundantly clear.”

Analysis: It makes sense to have a video including all of the elements. Apparently, this would be needed, whether working with experienced teachers or with new educators. A list of terms and charts of interactions would be useful, as would sources for teachers to reference for each lesson plan or for general support.

Additional comments about the evaluations

Music, movement, reading, and dialogue allow children to expand and compress time on task because the process is captivating. In the Musical Linguistics process, the students write, sing, act, and dialogue when exposed to new materials and content, which they write about every day as part of the program. Writing at the end of a unit is not the intention of this coursework which is to rotate stimuli, provide enriched experience, and create a new paradigm for learning where writing and reading, thinking and playing with words are the point, not testing or finished work. In other words, the objective is practice and performance, not fixed answers or doing it right. The process is participation with academic language and processing with others and alone. For teachers to
understand the Musical Linguistics curricula they need better collateral materials that show them how this is not the same as traditional classrooms and how to use the materials on their own and why.

Also, the comments imply that this curriculum is in the process of development and, just like a large publishing house preparing lesson plans, there is a testing and development component that is usually a beta test on any proposed curriculum. Student feedback is the way the curriculum should to be tested next.
CHAPTER FIVE
CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Based on the evaluations, applying Musical Linguistics theory to a curriculum such as Water Buddy can motivate students and support school success. The goal was to assemble a singable curriculum redefining the role of music with enriched activities that make vocabulary instruction specifically enriching and memorable, and it appears that objective was accomplished.

There are three aspects to discuss regarding moving forward with this work: 1) improve the curriculum itself and provide support for teacher training and implementation of the program; 2) develop Musical Linguistics into an accepted discipline; and 3) look at the potential for this approach to support the achievement of broader educational and social outcomes. This chapter will briefly address all three.

Improving the Water Buddy Curriculum

The process can engage students as well as help them acquire language and knowledge of their biome. In a relevant and timely way, water information framed in our biome can familiarize students with content and vocabulary-rich experience that broadens their perspective
in rewarding ways and familiarize them with the concept of stewardship.

The professional feedback was positive and encouraging. Musical Linguistics/Water Buddy students are practicing words, works, sound bytes, and cooperation while learning about nature. However, it would be important to explore slowing down the three lesson plans and some decisions need to be made regarding pacing, content, layout of a teachers guide as well as the lesson plans. A classroom diagram and lists of visual aids, sound files, instruments, supplies, and regalia might be useful.

It would also be important to find a method of demonstrating and evaluating student results, once the parents, principal, and school district give permission to move forward, especially with a class of students defined as below basic and far below basic or special needs learners.

One option is for this writer to develop a deliverable curriculum with twelve sessions to prepare the program as a potential outreach educational vendor. This would require finding funding through a grant or a contract to underwrite the costs of labor, insurance, development, web, and equipment costs. Operant funding would have to be advanced in order for the program to find
its way to local education agencies (LEA), state education agencies (SEA), or particular schools that would like to buy it in the future. Seed funding, research funding, or existing after-school or remediation support per child would allow the program to improve services and content and train new facilitators.

ML becoming an Accepted Discipline

Dewey suggested in the early part of the twentieth century, "schooling is not just about the individual," but involves "combining the child's interests with those of the society" (Dewey, 1871). Each child who acquires the love and skill of reading and stays in school will make a vital contribution to their home and community.

An informed professional can change the outcome of school achievement by building one relationship of rapport at a time, modeling kindness, compassion, and dexterity, while leaving no one out. This transforms the timbre and tone, even the results of education for provider and receiver.

The dynamic capacity of arts provides the modeling and connectivity that Maté has advocated for "the stuff that makes us human," emphasized at his course at the Skirball Auditorium on the social biological beginnings of
addiction to the development in humans of ADHD and continued In the Realm of Hungry Ghosts. In essence, Flechsig’s work on myelination and the dorsal spinocerebellar tract (The Somatosensory System, Gehirn & Seele, 1894, Leipzig) and other neurobiological research implies that to understand language acquisition, teachers need to understand working memory, pragmatics, and student behavior to beneficially impact early literacy development. In After-school Alert, “ELL [English language learners] students benefit from: direct language instruction, opportunities to practice oral language skills, language scaffolding during academic content instruction, parent and community engagement, and cultural background knowledge.” This project contains all but one of these.

Teacher preparation in the future can include recognizing somatic communication signals and signs; how unimpeded learning can take place maximizing on associative correlations; simple healthy brain chemistry; integrative hemispheric task differentiation; and skill set mastery that can help focusing. Their students will benefit from more and more sophisticated vocabulary when it offers “fun activities that utilize English and
challenge English Learners to expand their literacy” (After-school Alert, June 2011).

Thus twenty-first century literacy development in third graders might include the adoption of the Musical Linguistics theory and the Water Buddy approach presented here or another curriculum and a music and social change horizon presented in Changing Face of Music and Arts Education Journal’s articles that includes school climate and external issues that link academic and vocational goals. Through Water Buddy, children can broaden their horizons and reach out to the greater world, because they feel that they belong in it and to it. By evoking community, collaboration, cognition and stewardship in a city and county that expects 500,000 more Angelenos in the next 20 years who will share the same scarce water resources and space on our famous urban/rural flood plain, it changes attitudes by addressing school climate and lifelong issues makes school relevant and rigorous while being attractive. Becoming a Water Buddy, STEM literate, and a skilled reader will impact school, city and county plans while raising the horizons of present student bodies.

The arts, Secretary’s Commission on Achieving Necessary Skills (SCANS), and Science, Technology,
Engineering, and Mathematics (STEM) together can demand that young brains build synaptic processing pathways enabling third graders to broaden their sense of self and the world. Children, as authors of songs, become more willing learners. Not just because they naturally love the sound of their own voice, but also because it links them to classroom culture, their peers, and to nature. In the process of active learning and brain optimization, obstacles before them become right-sized and the support around them becomes acceptable. Peer-to-peer learning has worked since the classic Greek theatre and has an additive legacy to offer traditional classroom teachers a learning experience that includes movement and emotion. It builds better working brains, compassion, empathy, and understanding thus better students through memory skills and enculturalization.

Water Buddy focuses on making deeper vocabulary and phonemic awareness more meaningful and engaging. In the process, children are prepared for tests they will face in their daily classroom work and in annual assessment. A song through heaps of language and personal meaning embraces the whole world.

Singing and playing with each other make the words memorable and the process of reading a skill to embrace in
order to enjoy the process "along the way" to long term instead of rote (or storage) learning. Ruach (breath), plus thought (creation), and action (reading), in time to music or without, creates a fusion called "arts integration" (Eisner, 1998: Winslow, 1939) and applies it through yoking alphabetic to sounds through practice making phonemes or listening and understanding them as patterns that lead to words, grammar, and meaning.

Water Buddy can connect children to an increasingly important and sizable science vocabulary that will amplify future success and provide a solid foundation for positive school experience. By "ensuring a student's success from the earliest possible moment, children are more successful" decoding text. Musical Linguistics becomes a medium for encouraging children and in the process creates a positive metaphor for school experience. The brain, arts, and learning make the integrated student open to learning on a day-to-day basis and capable of passing assessments.

Potential for Broader Educational and Social Outcomes

Ongoing reports from foundations, such as the Pew Foundation and the Annie E. Casey Foundation, address the issue that fragile families need several generations to
catch up. They are cumulatively determining emerging or continuing key factors that impact disadvantaged, racial, and ethnic groups. These include: cuts in resources, lack of time, lack of means, poor health, lack of services, and barriers to having family involvement time due to a restructuring of wealth and commitments over the last twenty years.

Despite reframing family and teacher/school roles, families have more responsibilities and less time to invest in children’s success. Out of school time and learning centers have to supplement what is missing. (NB: This is already in place in certain CalWorks fee-for-service support for working mothers.)

By using overlapping developmental sequences in discrete sequential stages, layered in by grade level, children would feel more comfortable learning and learn through relaxed awareness instead of through stress.

What creativity can do for language is boost the motivation, vocabularies, and purpose in children who might otherwise go adrift. It is relatively inexpensive to add the extra experiential stimuli that they need to catch up. Language-rich stimuli build reading self-confidence so comprehension gaps can be minimized. The proposed curriculum process and theory support bringing music back
into school for many reasons: 1) it orders the mind, 2) calms the emotions, 3) focuses the attention, 4) builds vocabulary heaps and facilitates memory, and 5) makes school bearable or even cool for children who now don't have anyone listening to them and so they go silent and don't create goals. It teaches social, colloquial, academic and business idioms. It allows children to create analogies and "reach for the stars." It expands on Spolin's work where actors become communicators and fluency is just a part of the adaptive skills acquired along the way.

Conclusions

Water Buddy carries a large potential, despite requiring a further development phase. Although a new program will require further support to be effective, the feedback from the pilot was positive. The professionals involved felt that the concept could improve both individual and group student results by building vocabulary as well as contributing to ongoing research on improving effectiveness in early educators who impact English language and reading acquisition. This curriculum would add a peaceful, meaningful, and happy note to our
public school conundrum as well as respond to a need for comprehension, capacity building and retention.

Its concepts can prepare children, families, and teachers to learn in a supportive “village” and add this experience to their discussion to their Districts on effective, memorable, school practices that warm “school climate”. It can teach teachers to trust their choices and as well as help students build better pronunciation, posture, and word attack. Actively learning language through word play, drawing, acting, dancing, and musical concepts gives children the opportunity to learn at their own rate, in a zone of safety, in a period of rapid brain synaptic growth. The scaffolding builds inter-student and inter-teacher rapport through singing together, reading aloud, and taking risks to make class meaningful and memorable. In the process, the work is relevant and rigorous for all concerned.

With consideration of student and school failure ratio that could be mediated by application of recent findings in brain development and human synaptic network growth, years zero to five have taken on greater importance. Before the U.S. neuro-learning model (Dana Foundation) was developed, child development was cordoned off from elementary and secondary education, but no
longer. Schools, programs, and new kinds of providers are adapting to make children school ready and prepared to meet the challenges we give them.

Musical Linguistics proposes an ongoing social constructivist and active learning intervention in order to capture the attention of far below basic learners between kindergarten and third grade. The enhanced value of this approach is that it is mobile (happens between the ears), accessible, and reliable (based on neurology). It has great potential to spur American creativity when it is needed the most. It brings English Morphology, or the smallest units of meaningful sounds together, (both free and bound morphemes) i.e. those that carry content, function, derivation, and inflection with song or the concentrated patterning of sound units that contain expressive timbres, vowel-consonant and long-short stresses, idiomatic conventions, and sound production (Scarcella, 2003, p. 64).

To quote Hetland and Winner (2001): 1) “the arts are the only school subject that have been challenged to demonstrate transfer as a justification for their usefulness”; 2) We must remember that “the arts are fundamental and have been part of every child’s education ...in most cultures as time-honored ways of learning,
knowing, and expressing"; 3) When they are removed, they "leave education and society...impoverished" (Hetland & Winner, p. 3). This suggests we reconsider the bias mentioned in previous chapters in order to make another choice.

Brain imaging and other medical research point to human biological structure and developmental resources that can show us how to exploit language skill development and cognitive capacity building in education through the arts. Using Harvard's Project Zero findings from their Reviewing Education and the Arts Project (REAP), the findings of Musical Linguistics as an English language arts study has potential for resolving some issues in the present gap in existing policy by proposing techniques that carry "reliable causal value" that will lead to academic improvements with "minimal effort or expense" (REAP, p. 2). Musical Linguistics can add to the research, discussion, and application of the arts in education using Reviewing Education and the Arts Project's findings of "inherent merit, transfer value, and providing funding justification (REAP, p. 1-3)."

New English language learning and English language development standards are under review by the California Department of Education in order to meet federal
requirements of the national common core standards this academic year (2011-2012). Because of this scrutiny, placing this domain, ML, under ELA (English Language Arts) subject area requirements and implementing the project by using existing Board-approved core subject guidelines, will spur further discussion. In the context of English vocabulary building to gain program improvement (reading remediation staging), Water Buddy, the project, and the responses look timely, sound, and worthy of ongoing study. Because core academic and vocational studies, science, and math, all rely on vocabulary, the potential for positive scores and individual gains looks promising. Advanced levels of English literacy require the following key factors: “enough competence to access grade-appropriate reading, interaction with SESs, input via well-written texts, attention to form and effective instruction” (Scarcella, 2003). Further, Water Buddy music instruction allows for best practices of “direct, planned instruction, new reading models, attention to form, practice, motivation, instructional feedback and assessment” (p. 31). ML includes the linguistic components of Academic English (“phonological, lexical, grammatical, sociolinguistic and discourse” described in the Ordinary English and Academic English chart, (Scarcella, 2003,
As a bridge from oracy to literacy, singing to read using music and written conventions, or Water Buddy's musical linguistics, seems a programmatic response to illiteracy and has promise to strengthen children's relationship to learning, their capacity to use, retain and understand words, and through a post-modern approach repair their willingness to stay in school.

Figure 17. Running Head
Figure 18. A. I. R. S.
APPENDIX A

PILOT PACKAGES
Dear Colleague,

Thank you for agreeing to participate in my Master’s project.

You will be reviewing a sampling of the type of content being packaged as a projected after-school reading intervention curriculum for third graders. Your responses to 7 questions concerning the relevance and rigor of the concept behind the proposed remediation program and its first lesson plans are an important part of the Masters. You will receive the program’s arts in education protocols and my working definitions, goals, and supporting theoretical basis. Your feedback will become part of the Master’s Project your answers will be analyzed and given to my professors to be approved for binding no later than May 7th.

Please review the materials on this proposed after-school music program for English language students and answer a survey of 7 questions and send back your answers via bo_lebo@hotmail.com or by fax to 310-362-8400 by Thursday May 4th or by other arrangement on Friday, May 5th by 9 pm. Please include a 3-4 sentence bio with the one page survey when you send your comments back to me.

The following materials are attached:
- A short summary of the goals of the proposed 3rd Grade Water Buddy curriculum approach.
- An outline of the theoretical background, if you wish more details.
- Curriculum materials for the first three classes and overview of types of handouts.
- The questionnaire (questions and comments on one sheet)

In gratitude, I will give you a copy of the full completed paper if you would like an electronic one for your library. Your responses are key to completing the curriculum analysis chapters that finalize the project. Thank you ahead of time for your generosity, your promptness and your help.

Sincerely,

Cynthia (Bo) Lebo
818-742-5099 (cell)
Graduate Project Timeline for May 1-5, 2011

14431 Ventura Blvd. #312
Sherman Oaks, CA 91423

Integrative Education Master’s Project
Spring, 2011
Musical Linguistics MA Handouts: Overview for Reviewers

Water Buddy Curriculum

This first page summarizes the goals of the proposed 3rd Grade Water Buddy curriculum approach. It is based on best practices with language-focused curriculum (LFC) that is more often than not pushed out of the classroom because of constraints (Pence et al. article, Preschool Teacher’s Fidelity Article in Language, Speech, and Hearing Services in Schools, volume 39, p 329-341, July 2008, based on Bunce 1995). The attached pages outline the theoretical background behind using music as a phonemic tool used to provide enriched language content to 3rd graders and deliver it using the LFC guidelines with new state approved content or Water Buddy as a prototype curriculum to engage children and help them to build vocabulary.

Directions: Read and review all the materials or use your experience with this page as a guide to make the process quick and simple to use. You will be able to look at the materials for first three after-school enrichment classes with this content and be able to return to the 7 question and comment sheet Friday by email.

The proposed 3rd Grade Water Buddy curriculum approach uses the best language stimulation techniques I could find. These are not to replace reading instruction, but to introduce children to the following topics:

- Expressing contrasts between two or more sounds (thus making sound and syntactical or lexical distinctions),
- Making statements, comments or requests that contain a sound (heuristic language),
- Describing an ongoing activity or an event (listening and directions),
- Asking open ended questions,
- Repeating phrases for emphasis and meaning (recasts),
- Play acting experiments (prompted initiations), taking scripted play (acting out an event from the story or the illustration) and adding on to it creatively (from Appendix A. Language Stimulation Techniques, Definitions and Examples, p 340).

The project uses narrative and personalization to enable poor readers to fall in love with language, using children’s books and Kenneth Grahame’s tale, “The Wind in the Willows.” It uses music as a medium for children to connect their inner world to Nature, and be nurtured at school. Objects allow me to link the story of the characters “Mole, Ratty, Badger and Toad” to word walls, spontaneity, idiomatic phrasing, threads and themes. We attempt activities where one or two children lead the group, or the entire set of kids comes marching across the room. This follows the academic content standards for 3rd grade California History/Social Science Learning Objectives that include an understanding of the human interaction with geophysical features of the landscape and has children organize their thoughts about people, places, and habitats using photos, charts and maps and identifies geographical features like a meadow or a riverbed (p 91 of 152).

In my facilitator role, I set up rules as playful supports to keep children safe while they dance and invent with me. I play catch to model unconditional support, so they see that I will not punish them if they try and someone drops the ball.

The Water Buddy program is an enrichment program to bring broad spectrums of language to children based on connecting them to conservation and Nature through Science and stewarding water. It is comprised of Applebee’s (1986) 5 elements of learning language-ownership, appropriateness, structure, collaboration and internalization to bear with critical
listening skills (Jacobs 1990: Norton, 1983). Listening is the most fundamental and earliest skill in dealing with young children, but listening does not require language as does singing (Barr and Johnson, 1989 p14), pg 80, Chapter 2. In this immersion process, the content and contexts combine concept building, purpose setting, reading aloud, questioning and recitation within the context of involving children, improving their social skills and building their experience with academic language (Choat and Rakes, 1987, p79). Water Buddy exists in order to build comprehension, context and genre skills that will later lead to writing, academically appropriate participation, and comprehension that can lead to resiliency, confidence and regular joyful participation in school and at home (Source: Early Childhood Language Arts, Jalongo, Allyn and Bacon, 1992) (Source: Response to Intervention, Bender and Shores, Corwin Press, 2007).

We use rhythm, vocalization, props, technology, posters, relational charts, and ELA standards with the Visual and Performing Arts Standards to improve vocabulary, comprehension, behavior, skill mastery, and classroom participation levels.
Appendices of Class Handouts, Bunce Chart, and the Questionaire

Lesson Plan – One
Habitats
- The River Song (Ballad or Rap Song)
- The Meadow Romp Picture
- Habitat Pictures of the Arroyo Seco
- Maps - LA River Outdoor Classrooms
- MDC Youth Film Festival Entry (River Flowing)

Lesson Plan - Two
Danger
- The River Bank Band Brigade
- The Pictures of Mole Running Away from the Weasels in the Wild Wood
- Reading from the Primer Easy Grahame #3 or from Tales of the Wind in the Willows large format by Stella Maidmont
- Emotions Book Large Format Picture
- Going on a Bear Hunt/Group Storytelling (CD by Tickle Tune Typhoon)

Lesson Plan - Three
Community and Purpose/Point of View
- Recycling Map with Aging of Garbage (large format/CALrecycle)
- Picture of Mole White Washing
- Picture of the Raccoon effected by trash along the Riverbed
- Pictures of the Creekbed and the soils (EPA/Water Drop/Girl Scout
- Handout
- Pictures of children looking at trash dropped in the gutter (All the Way to the Ocean)

Suggested handouts, wall hangings, and large format books.
Curriculum Context
The enrichment world I envision through sounds, letters, music, and cultural exposure. I aim to earn their trust while bringing them the language stimulation, daily structure, dramatic play, art, story themes, group activities, and music that they may have missed at home or their prior school teachers may have not have provided. I work with the support of standards and musical frameworks to help them uncover an environment that makes development possible.

The goal of this project is to help failing students rediscover practice, performance, and participation through positive reinforcement (Ashcroft, 2008). The musical arts are used to build science awareness and vocabulary using arts scaffolding. The goal is to build a relationship with personal relationships with all kinds of academic and vocational language. Aesthetics and relationships help children to sort through silos of information and identify cues appropriate to including cognition, history, studies, and language, and inculcate them into schoolwork and daily habits. To succeed at reading children must improve their comprehension, the best way to do that is through reading, to enjoy reading children must be able to decode and blend rapidly and the reading is a complex process that unifies the function of different parts of the right and left lobes of the brain, the described internally as neural pathways and circuits or strategies. Unlike rote learning and lozanov technique, schools want to make fluent readers and help children to master vocabulary and so become a willing generation of readers. Because phonemic awareness becomes key to being able to move from perception to ideation and from stimuli to facility. The curriculum is geared to help children feel secure, try out building a user-friendly relationship the sounds and processing elements of building language, using language, and processing language.

The goal is to enhance the linguistic environment for third graders in order that build and develop the linguistic structures that will help them to build analogies, help them to write papers, allow them to calm down when tested, and order their thinking when reading textbooks, papers, and test questions (competency).

The objective is to make language arts skills and capacities memorable and fun resulting in new habits of mind and feelings being entrained into the learning situation (Katz, 1988) To quote Frank Smith (1989) in Jalongo’s text, “literacy is a social phenomenon. Individuals become literate, not from formal instruction, but what they do with it.” “Literacy is not a set of skills or a finished state….it is an attitude toward the world. A literate attitude makes learning to read and write both possible and productive.” By teaming vocational and academic constructs into arts in education practices and connecting relevancy and rigor of the natural sciences and brain development, children can get back in touch with learning, using what interests them, Nature, and an understanding of stewardship. The result is a bountiful cadre of new nouns, verbs, word roots, adjectives, adverbs and phrases. A new attitude plus a new vocabulary opens the gateway to a new world. Involving this kind of relaxed awareness opens complex brain activity resulting in attainment of educational goals.
Listening is the most fundamental and earliest musical skill in young children (Jacobs, 1990, Norton, 1985). By combining it with movement, sight-reading, melodic accompaniment, motor skills, and storytelling, the result is building memory units of vocabulary into the connections of the corpus callosum and the gyri. The bundle of fun experiences build frames of meaning, word spectrums, and webs of relationships that are processed in the visual and auditory parts of the dominant and nondominant lobes. The creative storytelling with listening, hearing, speaking, dancing, and writing allows children to work within their ability to “1) adapt to changes in setting, 2) develop communication competencies, 3) use nonverbal behaviors, 4) build familiarity with the constraints and conditions of conversations, and 5) learn to sequence” (Jalongo, p 97). In a cumulative process of building through mature play and through singing out, children learn sounds are building blocks, and they don’t have to be afraid of trying something out that may or may not work immediately (Hiteshaw, 2006).

Cultural values have long been embodied in songs. From classical genres to musical theater, from synagogue to hymnal, and from alphabedecario (the alphabet song mnemonic) to Rosie, Ha Ha Rosie (American jump rope/play party or field hand work songs), songs carry the power to motivate and inspire.

These principles will be applied to creating an instructional method to enhance reading and language arts through studying water conservation. Studying water is a strategy to incorporate science, literacy and the creative arts into the 3rd grade experience.

Curriculum Focus: Water

The proposed program is child-centered, language arts rich, and emphasizes reading through literature and picture book immersion. It will focus on Water. Not only will linguistic skills be developed but also a much deeper understanding of this important topic will be introduced through experience, combining the sciences with literature, mature play, and creative investigation.

Learning about how precious water is and how life systems depend on water allows urban children to embrace accelerated learning, dynamic vocabulary, and natural functions. It also footprints in the elementary grades with setting life giving habits that can maintain healthy bodies, impact families and build school and life readiness. It models chaotic math and systems theory.

Understanding water resources, especially in a region with supplies imperiled by growth, climate issues, and an aging infrastructure, bridges silos of information to children. This curriculum will inspire student interest to understand relationships, systems, and applied theories. It is small enough to matter in their neighborhood locally and large enough to see the big picture. For example, the United Nations (Decade of Water Initiative, 2005-2015) has alerted world members that only 2% of pure fresh water remains on the earth.

Science and math content delivered through musical linguistics brings synaptic pathway research to apply language arts research to how the brain builds meaning. Music and the arts offer new strategies for student experiences, when teamed with effective, relevant content. Water can teach children about topics from engineering to interstate negotiations over natural resources. With hydrogeology, it can invite children to understand our history and our future. Using water can braid experiences
using a hallway water fountain with catalyzing thinking and spelling, and problem solving formulas.

By linking symbolic play, individual interest, the need to socially learn and the support of risk taking in safe environments, the water curriculum allows these children through linguistic experience and phonemic play with academic vocabulary to remediate missing support at home and in daily class work. Some of the most powerful developmental experiences are available through aligning the senses with Nature. This allows children to experiment, discuss, and apply scientific content that bridges nature into public school (Louv, 2005). This makes a large content of disciplines, nouns, verbs, adjectives, adverbs, available to students in the reality of what they see and hear. Using examples of scientists, philosophers, researchers, professors, civil engineers, and sportspersons, water can make science tangible. Each water segment can build bridges to the outside world in many ways: conceptually, phonemically, and in print. Scientific inquiry and terminology can assist in vocabulary, spelling, decoding, writing, and narrative improvements that will be utilized in the later grades in essays, papers, and research projects.

Building comprehension, participation and self-confidence in Earth Science, by learning about urban impact on water resources in the context of another discipline, English (SAE), seems promising and timely. By including the coast, wetlands, and geology, the project includes content of where we live, how we live, who we are, what we appreciate, and what we want to pass on to future generations. Students are literally in a watershed moment where humanity could choose to include respecting life in formal education (Gunther, 2010) (AB1548 EEI Curricula).

The project uses narrative and personalization to enable poor readers to fall in love with language, using children’s books and Kenneth Grahame’s tale, “The Wind in the Willows,” (1908, Tales of Wind in the Willows) to envision a new river free of its cemented banks and past civic isolation. Available science study modules are not lacking, what has been lacking is an emotionally viable tie to support students to meeting the achievement goals the schools are mandated to achieve.

The approach allows children through wonder to make reading a preferred personal habit and participation and performance both possible and rewarding. The music tutor technology or learning to read in rhythm and with a pace of the rhythms of English speech is key in helping children to adapt to faster and faster visual/auditory stimuli being able to be processed and sorted, archived or stored correctly.

Songs are used that will repeat and refer children back to threads of meaning, topics, and to layers of language that become meaningful and allow children to author or to become an editor re: choice of words, meaning, and intention. Play acting with reading and with composing becomes a strategy to blend creation, with discovery, and with enunciation and word placement.

It uses vocabulary from the State EEI Curriculum word walls with additions from coffee table dialogic reading pages available for after school class usage, following the Lonigan model from ELD CEU trainings with the LA County Office of Education.

The example curriculum, “Water Buddy,” has many advantages. Singing about habitat or a riverbank can make connections to problem solving, dreams, and even careers. Words can become more than consonants, diphthongs, and vowels, but pathways to new horizons. The breadth of telling a story in one and half minutes embraces the
components of language acquisition both in phonology and phonemic awareness, ideally including phonology, syntax, semantics and pragmatics. (Levin, 1983, Jalongo, 1992)

Children do best when alive, alert, awake, and enthusiastic. In this project, music is utilized as a spontaneous group process. Using a web of interactions between the facilitators and the students, the curriculum utilizes the links of the rhythm in language to principles of psychoneuroimmunology (Bittman, 2001). Music can help build the synaptic connections that are essential to successful English language development, including facility with processing visual stimuli, memory, thought, and vocalizations. The curriculum presents a musical intervention designed with linguistic and rhythmic content that weaves sound patterns, meaning, and emotion together with movement, rapid eye scanning, and sound production. It involves one-to-one participation, instruments, drumming, and/or choral voicings.

The Water Buddy curriculum uses physical response in tandem with diverse learning styles, including strumming, acting a character, and adding a line to a song (a songwriting technique from Jessica Baron (Baron, 2011). Using what Baron refers to as creative “grapho-motoric” skills and “visual self-expression,” this curriculum is only one example of a potential large body of collaborative, community-based, artist/instructor-driven interventions. The curriculum for this project is not a new concept, but a new construct to bring alive a broader vocabulary.

History of this Curricular Approach

Between 1997-2004, Cynthia Lebo and William Elliott (as volunteer instructors and live arts providers) developed ways to involve children in lyric writing and storytelling using Kenneth Grahame’s characters and stories about animals who inhabited a riverbank (under the name “The Mindspan Digital Literacy Initiative”). Elliott’s music is adaptable to linking Grahame’s characters to the Visual and Performing Arts Standards (VAPA Standards). Lebo and Elliott teamed with the US DOE Mars 2030 project in order to link musical theater with space science and writing through small learning communities. Honoring the US DOE mission and the county arts commission and school districts planning, Mindspan’s volunteers provided interdisciplinary instruction by incorporating lessons from several disciplines. (Anderson and Milbrant, 2005)

From its inception, Mindspan incorporated many arts-in-education learning models into its daily practice formula. Learning types included 1) idea and theme-based; 2) problem-based; 3) project-based; 4) inquiry-research based; 5) collaborative learning; 6) student-initiated learning; 7) computer-centered; and 8) flexible assessment-based approaches.

The curriculum was designed to be delivered in short, sequential, arts and reading intervention modules. To improve below basic student school readiness, Mindspan’s approach was to use musical theater in combination with songwriting as the glue for a program reliant on repetitious English Language Skill Development and its interactions with children seemed to work well. Pam Sasada, then the Los Angeles Unified School District’s office of instruction observer, reported the program successfully by-passed the students’ affective filter, which could hopefully lead to
important academic breakthroughs (Sasada verbal report, circa academic year 2000-2001).

The result was a community project that was both lively and experiential. County, state, and university protocols were used including district directives. State and federal research was compiled into a theoretical base using tested strategies and additive content scaffolding. (Arts Education Partnership report 1999; LAUSD Performance Evaluation and Research Branch Arts Prototype Schools Program Evaluation, 2000-2001, applied VAPA CDE standards with US DOE Mars 2030 field partner protocols, 1999-2001).

Linguistic Skills Addressed by this Project
This project unites two kinds of communication skills: paralinguistics (nonverbal), and linguistics (verbal) (Jalongo 1992). By linking facial expressions, intonation, body posture, and gestures (Menyuk 1988) with written and oral language development, the Water Buddy curriculum supports multidimensional learning in English. The curriculum links an understanding of how children learn with the components of songwriting and musical theater. The student experience evolves from evoking telegraphic speech to singing and reading, writing, and play-acting. This enables students to use phonology, syntax, semantics, and pragmatics in two contexts: 1) to express their own meaning and 2) to make their own attempts to model complex sentences. The content uses rhyme songs with appropriate meter and themed content (see an example lyric sheet in the Appendix: "Habitat, Green Songbook").

By including give and take between presenter and student, while working with the components of English speech and academic expression, the pedagogy engages the students in working with solo, group, and unison cantillation. Open questions and dialogic reading builds student experience in developing personal language from one word utterances to complete sentences, aloud, on paper, or sung. By working with pictures and describing them using nouns, verbs, and adverbs or adjectives, (Choate & Rakes, 1987) the project builds on linking concept building, purpose setting, reading aloud, questioning, and recitation together with phonemic awareness (Lonigan, 2004). It uses critical listening skills (Jacobs 1990, Norton 1985, page 79-80) that build on visualizing what is heard, comprehending meaning, responding to a message on emotional and intellectual levels, and applying these through working with words, rhythm, rhyme, melody, meter, rest, and silence. Songs provide an introduction to phonology, syntax, semantics and meaning making (How Children Use the Components of Language, p 12-15) through song, lyric play, discussion and choral singing.

The process repeats the sequences by which children learn to talk (Early Childhood Language Arts, Chapter 1, page 8). Children find that they can make mistakes and learn how to correct their misunderstandings in sounds or meaning. While working with risking, rhythm, singing, and movement, they repeat the stages of language development. (Jalongo 1992, Dale 1972, Loban 1976, Maxim 1989, Papalia and Olds 1986) The curriculum builds on five elements of learning: ownership, appropriateness, structure, collaboration, and internalization (Langer & Applebee, 1986). It allows for bilingual learners to be silent and process and then jump in when they feel like it (Barr & Johnson, 1989, p 14). Following developmental paths of bilingual people, the research supports the fact that these children need patient attention to support their complex
developmental tasks (Barr & Johnson, 1989, pg 14).

Building on the power of choral speaking (Tickle Tune Typhoon, 1983, “Going on a Bear Hunt) and using each child’s body as an instrument, sound maker, recitation device, and character developer, the curriculum uses “action rhymes that can involve the whole body enacting or interpreting a chant” (Speaking Abilities of Young Children, p 115). This approach can allow children who are slower to participate, for various social, personal, or developmental reasons, to work through monologue, repetition, and both monolingual and bilingual expression, to explore dialectic differences, build proficiency and construct sensical and nonsensical patterns, all for the love of beautiful sounds that reflect the noise of urban and rural settings around them. The sizzle of bacon, the onomatopoeia of the sssshhhhhhh of a water running from the fountain, or the clicking of a drip from a faucet can become a way to create diverse story telling elements that can build into an orchestra of sounds. Students can imitate the sounds of an alley using night calls from owls, cat calls from flirting alley cats, the swish of a car moving by, and the click of the latch on the recycling bin (Baye, 1993).

The project uses music and playfulness to bind students’ “emotional and social drives” in a positive experience that “greatly affects the process of language development” (___, p8). By encouraging the children to be creators of language, they become the primary agents in their process of acquiring language, specifically because their need to communicate drives them toward linguistic competence. (Jalongo, 1992).

Supporting all seven functions of language (Halliday 1975; Goodman 1982, page 16-19), songs can contain instrumental language, regulatory language, interactional language, personal language, heuristic language, imaginative language, and informational language. The goal is to use music to link children intuitively to build their language synapses, through the experience of call and response involving a message, a medium, a context, a sender, and a receiver. (____, p____) Children are invited to become active partners in the process of learning to communicate, using the assumption that this helps them build on the construction already resident in their developmental staging: “the real skill in reading and writing is intelligent construction by a child” (Ferreiro & Teberosky, 1982, p 345).

In pairing sound to meaning (Saussaure, Philology, 1910), the participants can relate a song and its purpose to the study of a unit theme. They can use movement and hand motions when appropriate to relate the story via dramatic play to their peers. By combining large format dialogic reading, and social needs with writing, art, story, group experiences, this approach weaves music into the daily structure of core studies.

The curriculum follows on the findings of Pence et al. (2008) that a comprehensive English language curriculum is proven to have a value-added benefit only under circumstances that include frequent repetitions. Kaderavek and Justice, et al. (2010) reported higher success by at-risk children who receive relatively large doses of a curriculum (as measured in days of attendance during the academic year). This article emphasizes that quality language instruction produces accelerated expressive language growth during pre-kindergarten. The benefit of working across developmental writing, reading, listening and hearing domains is described in the Governor’s Reading Panel recommendations

The curriculum uses daily word practice beyond the dolch word requirements of AB 1548 and, by tying in exciting new content with melody, interactivity, and
creativity, children are supported to learn about phonemes, graphemes, morphemes, and n-grams. The processes of hearing and remembering, reading and participating, listening and imitating, writing and speaking, and taking turns involves children directly. Their enthusiasm for new experiences, specifically music, persuades children to take risks alone and in common, while reaching out for meaning based on their innate need to communicate. Through the process of cognitive dissonance and self-discovery, they begin to build increasing comfort with academic language, providing the means to succeed in print and in writing as well as in class (Dana Foundation 2009, Figure 1, p 4, and Summary of Neuroscience Research, 2010, p 15).

Musical Linguistics

Musical Linguistics, as a domain, is socio-emotive ELL active learning model that is evolving from the music scene in the arts in education movement. ML could be predictive of improved school and social success through utilizing affordable, dynamic, developmental and linguistic means. As a school reform methodology vital to children, teachers and parents, this example and product of ML Water Buddy involves: 1) teachable moments which are student-centered, nurturing and positive, experiential, stimulating; 2) systems-based examination of Gregory Bates feedback loops and basic science (STEMS with praxis); 3) arts-based elements in Language Arts that embrace motor skill coordination/processing and Phonemic Awareness success; 4) writing-oriented with playful mind games, scribbles, and sorting that allows for formational thoughts and self-explanation (voice/narrative); 5) effortless-memory/domain transfer through semiotics involvement not through effort (signaling meaning or combining relaxed processing with active learning).

The Water Buddy Curriculum

It is composed of a 45-minute module and here are its characteristics: 1) useful-Phonemic Awareness Vocabulary Building Sessions; 2) setting-After School or Head Start sites (0-K, K-3 service populations) (children, instructors, parents); 3) topic – Water Science Dolch Vocabulary (pictures, concepts, and sight words); 4) neither vocational nor academic english only, but both; 5) the environment and the process invites the discovering of predictive socio-emotional vocabulary development that evens the gap in language orientation, skills and capacities through performance, 6) it promotes experiential activities such as rhythmic entoning, singing, narrative poetry, lyric writing, and rhythmic socio-play as building blocks from rimes, rhymes, to sentence formation and compositional competence that builds from PA awareness. Science words provide enriched vocabulary, word roots, and concepts building student capacities to correctly apply and manipulate words and conjugations, verbs, nouns, adverbs and idioms.

After-School Project’s Characteristics

The program is based on teachable moments, enrichment and dialogic reading
combined with learning styles and psycho-motor integrative processing. Elements include:
a) dance/movement component/socio-play (energize the body); b)
yoga/movement/meditative component (still the mind); c) voice component (put your
whole self in-singing, reading, and enunciating, listening and being social); d) writing
component (risk taking and whole language work with dialogic exploration,
print awareness, phonemic awareness, grapheme awareness, and practice putting pen to
paper).

It has three elements: 1) Body Mind Involvement in an Imaginary Eco-System
(not delivery or test based, experiential); 2) Dialogic Reading and Singing in Group and
Solo (not teacher based, student-centered and improvisational); C) Invention and
Writing(creativity based AND hand/eye/thought communication through writing) (working
with pictures, meaning and grapheme-based)

Its source material is structured from regional objectives regarding
water supply, water quality, enhanced habitat, open spaces and recreation, and
sustaining infrastructure for local communities. Particularly Water Buddy as
suggested is a STEMS response through music and active learning to connect school
to Nature and children to Nature. WB is an expansion of science, conservation, and
study skill/reading and writing strategies focused on frequently used words
examples: through water studies, stewardship, management and
Gregory Bates/Margaret Mead's Systems Theory and Feedback analysis loops kids
learn new horizons.

It's outcome product is a dynamic instructional method using research to
structure underlying principles for a series of 30 class subjects that can be delivered in
rotation in after-school enrichment programs. It's source content has been provided by
the Coastal Commission, the Integrated Regional Water Management Plan, SAWPA, and
LADWP, OCWD, CaRecycle, Surfrider, Save our Seas, and state certified content
providers. It's process is proprietary to its creators.

It is not a substitution for regular instruction. It is a recasting of regularly used
and new words in natural settings. It is a student-centered and nourishing. As adjunct
programming, its concept is to provide a fun workout with the most at risk students and
"anchor in" positive school attitudes by socio-play with words, phonemes, graphemes.
With games that include self-expression, rimes, rhymes, and patterns in enunciation,
breath, movement, voice, social control, and putting pen to paper, the fear of testing is
left behind for vocabulary modeling and the joy of creating.

Component elements: 1)Vocabulary lists, games and large format images for rapport and
evocation; 2) Scientific, Mathematical, Engineering, and Technology Content; 3) Music
compliant with constructs, graphics, and ideation that describes functions, processes,
systems and cycles; 4) Classroom regalia. Other components are: Classroom
arts equipment, storage, transportation, inventory, insurance, contracts for permissions to
work on campus, permission letters to work with the kids from their guardians, and
supportive communications with administrative staff, principals, and classroom teachers.

I entrain children instead of instruct children in three ways: 1) show them it’s ok to drop the ball, 2) show them it’s ok to pick it up or get help from someone else, 3) create the space for them to step in and use what they are learning in open-ended discovery and participation.

I am enclosing a picture of the music tutor that streams music and lyrics so that children can read in time ... slowly at first, then faster and faster, sometimes with the support of a melody and percussion. You will see the props, drums and high and low tech equipment that I use to evoke writing, composition, performance, and cooperation.

Here are some pictures of the environment:

 Chairs face the board so students can get up and read and sing or sit down to write.

 Space in front allows children to interact, come up on mike, or pick up a prop and a prompt from a large formatted picture just discussed.

 Rules have us do an exercise and sit down to be on time with tasks.

 We use toys, charts, musical instruments, pictures, maps, tv and music tutor or digital means for working with streaming language as well as song sheets, children’s picture and poetry books, guitar and music books, lyric sheets and blank paper. We use fabric, a large hula hoop, instrument building, prisms, and bubbles or balls to imitate what we see in nature. We use state and nonprofit curriculum guides to make our information current and scientifically based.
Lesson Plan One  Habitat  Musical Linguistics

Lesson Plan – One  5/1/11 3rd Revision, Prepared by C. Lebo

Lesson One-Living Things and Geography of where we live

Habitat- Water Buddy Program is a 45 minute after-school program based on linking a musical version of Kenneth Grahame’s The Wind in the Willows to enlivening STEM content from the State’s EEI Curriculum, the Coastal Commission Ocean Stewardship model, and state and local River Revitalization and Water Conservation programs.

When: 75 minutes weekdays between 3-6pm or mornings in school by arrangement
Who:  Two presenters (artist/educators)
What:  English Language Arts enriched through the lens of Science enlivened by Drama, Dance, Singing, Performance, and Composing
Why:  To improve student language arts fluency and school adaptation outcomes

Process: The Teacher Guide for the Day:

Every day has a warm inviting hello and a singing time. Every class has a highly enriched classroom, the dialogic images and study scaffolding support charts. Every class has solo and group responses. Every class has room for group invention on a theme, topic, thread, or section. Each program has an idea of the day and a group of vocabulary words.

Every class has the music tutor and the primer to read from either aloud singing with accompaniment or out loud in group or solo reading sections. Teacher/student activities can include questions and Bunce type interactions: focused contrasts, modeling, event casting, open questions, expansions, recasts and redirects or prompted initiations. Each class has a song or song choices, daily themes, movement and hand motions, and writing after an active activity.

Because the school day is so full the process of this activity has three beats: a) Activate the body; b) Still the mind, and c) Write. Writing and observation are the ways an instructor document student progress. Movement, toning, reading and vocalization, breathing and dancing are the way kids get to link thinking, higher order problem solving and relationships that use the neo-cortex in combination with motorskills and decoding and blending.

Traditional Class Strategies:

a)  Foundational skills in language and literacy (explicit, systematic instruction in vocabulary
b)  Incorporate home language if possible
c)  Alphabet knowledge, phonological awareness and print awareness
d)  Work with rhymes, syllables, recognizing sounds in words, matching sounds to letters
e)  Interactive games, listening experiences, spoken language arts, call and response
f)  Skills that can transfer across languages
g)  Make connections between what children know and what they need to know in whatever languages they use based on culture, observation, and interaction behaviors
Lesson Plan One

Foundational Thought:

Children require multiple exposures to words in order to develop a rich understanding of their meaning and use. Teachers should make a point of introducing interesting new words for children to learn into each classroom activity (Tabors, 2008).

After-School Guidelines: Enrichment and empowerment, choice and fun, mature play, not a replacement for teachers work, new ideas that build on existing skills, previous experience and dialogue, encouraging children to raise their hands, make choices, participate and work to collaborate with others using words, movements and drama/music/art/writing and/or combinations.

Enriched Classroom Design:

Semicircle seats with writing/project tables, blackboard, poster display space, dry erase, open space to dance, electricity for music tutor, table for music supplies, instruments and props.

Wall Space: Pictures of Habitats, Large Format Picture of Mole Running in the Meadow

Music is put up on the board. Children have a place to hold and play with percussive instruments: rattles, shakers, drums, recorders, and world wide sound makers of different timbres ancient and new.

Music can be singing along, making a sound, clapping hands, saying a world with a melodic tone or accent or reading with the music tutor.

Pictures catch kids up with themes in books captured in great photos, charts or illustrations. Water images from *The Wind in the Willows* can include most of the following list of EEI content by looking at the images along the Riverbank for example. California Education and the Environment listings: K3.1 (The World Around Me), K3.c (A Day in my Life), K4.5/K6.3 (Some things change and some things stay the sam), First Grade (1.2 a Surviving and Thriving, 1.2.c Finding Shelter, 1.2.d Open Wide Look Inside, 1.2.4 People and Places, 1.4.2 On the Move), Second Grade (2.21 a and b Cycle of Life, 2.2.c and d Alike and Different, 2.23e and f Flowering Plants in our changing world, 2.3 a and b The Earth Rocks, partial example) and Third Grade (3.31 a Structures for Survival in a Healthy Ecosystems, 3.3c and d Living Things in Changing Environments, 3.1.1 and 3.1.2 The Geography of where we live, 3.2.2 Californian Indian People-Exploring Tribal Regions partial list) 

Source: Expanding Environmental Literacy
Lesson Plan One

in K-12 Students. Our goal is catching children up with a rich infusion of language skills focused on vocabulary built from experience, playful interactions, risk taking and community and solo endeavors with phonological play and decoding and blending.

Class Overview:

2:30-2:45pm Set up Room
2:46-3:00 pm Start,
3:01-3:10 pm Warm up. Alive, Awake, Alert, Enthusiastic Song
3:11-3:14 pm Hellos, catchup, and look at picture of mole (group work in dialogue)
3:15-3:30 pm Movement process (using a hoop, prop used as a tunnel)
3:31-3:45 pm Instructional part of the day, kids choose either the word wall, or a song
3:46-3:50 pm What is a habitat? Describing a habitat.
3:51- 4:00 pm Reading of The Wind in the Willows Habitat easy section out loud
4:01-4:14 pm Map of where we live example the Arroyo Seco or Badger Mountain. Exploring words through looking at pictures of animals and birds, horizon, creek bed, trees, more words and their concepts and spellings
4:15-4:20 pm Habitat song as a singing exercise
4:21-4:30 pm Writing about home as habitat
4:31-4:40 pm Review from last visit or the Mariposa Song
4:41-4:45 pm Dialogic Discussion- Picture of Mole on the Grass
(Describe it using new words)
Teachable Moments: (Dialogic Readings)

We use large format illustrations for example of mole running in the meadow as a system-based, arts-depicted and writing preparation experience. It is created in the moment from small readings and students discussing the print they have read and what the drawing evokes in them. In Graham Philpot's picture of Mole coming up to run across the Meadow, it demonstrates what kids are seeing this Spring, Kenneth Grahame's first scene with Mole going above ground to see the River, and what a meadow might look like when imagined in the World Around Me by William Elliott.

Singable Descriptions:

The River Flowing Song (Sheet Music Attached) (Lyric Sheet in time on the Music Tutor with the Melody) I can post the words on the board and pop corn read them with the kids one by one and then as a group.

Prop Choices:

The Hoop as a stage. I can put the hoop on the ground for children to storytell. Each child enters the circle and presents a "Here I am" song, learning to improvise communicating about self to others one by one (an example of a game with a prop).

Concept for the Day:

In this lesson we go over the Modes of Expression- Narrative, Poetry, Music Chart and look at the lyrics of the River Song, River Flowing. It is an A/B song with rhymes, and with a verse and a chorus and look at the words describing Riverbanks where we live.

What is a Water Shed?
We look at a picture of a Water Shed.

What is a Habitat?
We look at a picture of the Mole's home underground.

What kinds of animals, plants and birds live near you? (open-ended questions)

Ecology of the Arroyo Seco- Hahamonga Watershed Park- (Flash Cards of the Animals/Birds/and Fish)

How do we know where we live? (We look at a map of the Watershed Park in Pasadena)

Picture of the Arroyo Seco Ecology- ( We look at a view of the stream bed and the canyon)
Reading- Habitat

(We read a *Wind in the Willows* Easy Excerpt about where the animals and people live, 3rd grade standards.)

**Word Play** with words and names on the word wall:

Red Ball Catch Game with Words, Word Wall, Pictures (Arroyo Seco content Below):

- Nouns in the Song- Oaks, Acorns, Canyon Creek Sands, Toads, Frogs
- Local and Migratory Plant Life-plant communities
- Native and Invasive Plants
- Directions: North, South canyon
- Shelter: Shady Ravines, Slopes, Sandy Stream bank, Flood plans, banks and streams
- Noun- species, terms, vegetation, prey, nest, wildlife
- Verbs- Haven, perch, activities, fluctuate, nest
- Descriptive words- aromatic, riparian, deciduous, drought planting
- Water- flow, geography, high, low, periodic flooding

**Dramatic Play:** Mr. Mole Comes out and sees the river, runs and jumps in the meadow:
(3 minutes)
Lesson Plan One

What might he see in the Arroyo Seco Park (Four Habitats-)

1. Mulefat and Willow Scrub
   Fish – Arroyo Chub

2. Sage Scrub, mint, turpentine, sage, California sagebrush, black sage
   California buckwheat
   California Quail, California Ground Squirrel, Western Fence Lizard

3. Coast Life Oak Woodland, acorns
   California Sister Butterfly, Woodpecker, Aboreal Salamander

4. Sycamore Riparian Woodland, native sycamore, white alder, cottonwood trees
   Red tail hawk, nuttail woodpecker

On the Wall, a Large Picture from the Trash Book-
   Human and Wildlife Interactions (Dialogic) (3 minutes)
   What do you see? Raccoon and garbage
   How do we take care of wild life?

Sing and stamp our feet:
   Butterfly or the Mariposa Song- Dance 1.5 minutes

Sit down and Write: about your habitat at home: 5 minutes

Resources: Appendix D- Grade and Discipline Specific Standards-based Learning
Objectives, courtesy of Mindy Fox, California Environmental Protection Agency,
Science/History and Social Science- In the Context of California's Environmental Principles and
Concepts (EEI model curriculum plan, 6/2/5, K=6. Science p 38-152, K-6 History/Social Science,
p 85-108), Arroyo Seco Park/Pasadena

Waves, Wetlands and Water Sheds, California State Coastal Commission
Green Songbook, Alfred Music, Jessica Baron
Tales of Wind in the Willows, Barnes and Noble, Inc., Stella Maidment
Pasadena Water and Power, California Poppy, State Flower
Shower Timers, LADWP
LAUSD, SDAIE Criterion
Lesson Plan Two
5/1/11 3rd Revision, Prepared by C. Lebo

Lesson Two- Danger- Adventure in the Wild Wood

Adventures in the Wild Wood- Water Buddy Program is a 45 minute after-school program based on linking a musical version of Kenneth Grahame's The Wind in the Willows to enlivening STEM content from the State's EEI Curriculum, the Coastal Commission Ocean Stewardship model, and state and local River Revitalization and Water Conservation programs.

When: 75 minutes weekdays between 3-6pm or mornings in school by arrangement
Who: Two presenters (artist/educators)
What: English Language Arts enriched through the lens of Science enlivened by Drama,
Dance, Singing, Performance, and Composing
Why: To improve student language arts fluency and school adaptation outcomes

Process: The Teacher Guide for the Day:

Every day has a warm inviting hello and a singing time. Every class has a highly enriched classroom, the dialogic images and study scaffolding support charts. Every class has solo and group responses. Every class has room for group invention on a theme, topic, thread, or section. Each program has an idea of the day and a group of vocabulary words.

Every class has the music tutor and the primer to read from either aloud singing with accompaniment or out loud in group or solo reading sections. Teacher/student activities can include questions and Bunce type interactions: focused contrasts, modeling, event casting, open questions, expansions, recasts and redirects or prompted initiations. Each class has a song or song choices, daily themes, movement and hand motions, and writing after an active activity.

Because the school day is so full the process of this activity has three beats: a) Activate the body; b) Still the mind, and c) Write. Writing and observation are the ways an instructor document student progress. Movement, toning, reading and vocalization, breathing and dancing are the way kids get to link thinking, higher order problem solving and relationships that use the neo-cortex in combination with motorskills and decoding and blending.

Traditional Class Strategies:

a) Foundational skills in language and literacy (explicite, systematic instruction in vocabulary
b) Incorporate home language if possible
c) Alphabet knowledge, phonological awareness and print awareness
d) Work with rhymes, syllables, recognizing sounds in words, matching sounds to letters
e) Interactive games, listening experiences, spoken language arts, call and response
f) Skills that can transfer across languages
g) Make connections between what children know and what they need to know in whatever languages they use based on culture, observation, and interaction behaviors
Foundational Thought:

Children require multiple exposures to words in order to develop a rich understanding of their meaning and use. Teachers should make a point of introducing interesting new words for children to learn into each classroom activity (Tabors, 2008)

After-School Guidelines: Enrichment and empowerment, choice and fun, mature play, not a replacement for teachers work, new ideas that build on existing skills, previous experience and dialogue, encouraging children to raise their hands, make choices, participate and work to collaborate with others using words, movements and drama/music/art/writing and/or combinations

Enriched Classroom Design:
semicircle seats with writing/project tables, blackboard, poster display space, dry erase, open space to dance, electricity for music tutor, table for music supplies, instruments and props

Wall Space: Pictures of Habitats, Large Format Picture of Mole Running Through the Wildwood.

Mole reading includes gerunds, verbs that are describing his feelings running from predators.
Classroom Design: semicircle of writing tables, dance space, black boards, white boards, Internet and bulletin boards, Enriched Classroom set up.

| Music: Voice, Cantillation, Music Tutor, Drum |
| Writing: Pen and Paper |
| Instructors: 2 Instructors |

Class plan: 2:30-2:45pm Set up Room
2:46-3:00 pm Start, 3:10 pm warm up, stretch, voice warm up (5 W song) we sing about who, what, where, when, why and how with body gestures to parts of the body
3:11-3:14 pm Hellos, catchup, and look at picture of mole hiding in the woods or running from the weasals (group work)
3:15-3:30 pm Movement process (tree as a hiding place, what are you scared of drumming talk, what is a scary feeling?) (spinning game-spin and say a feeling) (Feeling Book Large Format Print
3:31-3:45 pm Instructional part of the day, word wall, and song (kids vote on which song section of River Bank Band Brigade)
3:46-3:50 pm What is a dangerous? Describe when you were scared and faced danger, enemies, or all alone like mole.
3:51- 4:00 pm Reading of The Wind in the Willows easy section
4:01-4:14 pm Look at pictures of beaks, claws, wings, and camouflage
4:15-4:20 pm Singing exercise with Music Tutor slow to fast lyrics
4:21-4:30 pm Writing about Badger protecting Toad, Ratty protecting Mole or about parents or family protecting you or a time you were scared
4:31-4:40 pm Review from last visit or Lyric Sheet with the March/River Bank Sheet music exercise
4:41-4:45 pm Dialogic Discussion- Picture of Mole on the Grass now with scary or happy words. (Describe it using verbs and nouns/sing the whole Riverbank Band Brigade and march out.

Wall Space: Pictures of Habitats (Bionomes) (Word List) (Shapes) (Colors)

Dialogic Space: Picture of Mole hiding from the Weasels in the Wild wood

First Song: Riverbank Band Brigade

Prop: Flashlight
   My Character is .... (Mouse, Snake, Rabbit, Hawk, Eagle, Alligator)

Introduction to an idea of a Game for next class: the Stop Song and for colors the Green Song (motor control and coordination with words and colors with words)
Concept for the Day: In this section, we address the Modes of Expression- Narrative, Poetry, Music Chart and look at the verbs in the Mole discussion section.

Acting Subjects: Real and imaginary dangers, discussion and acting out emotions. Example show us fear, greed, hunger, hunting...

Home Turf: Pictures of Shapes and Color Mixing for painting, children can mime mixing colors or make shapes with their bodies or with teams.

Upcoming Classes and Supplies:
Recycling Supplies and Science of Recycling (New Ideas! Making puppets)
Recycling: What could you recycle? How could the school recycle?

Supply List for other classes-exercises at home or in class:
Neighborhood: Water Audit/Home Audit – Water Timer (3 minutes) and audit card
Home Turf: Pictures of Shapes and Color Mixing for painting

Attitudes for Characters:
Respect: Do you think about water? Waste water? Who shares your water?
If you were a weasel how would you act if water were precious? If you were Toad?
Ratty? Badger? Explorations for the next class: characterisation

Sound Excursions:
Charlotte Diamond- Into the Woods version of the Tickle Tune Song (Vampire Version)
Demon of the Woods listen to it (Wind in the Willows CD) Use wall chart to write in words in the pattern of the syllables like hanged man. Work in large group to replace verse one, one line at a time, fill in the blanks by rhyming together, make up sentences, one line at a time.) These two exercises may take several weeks to build up to working from sound patterns with drums, to patterns with names, to rhymes and sound imitations, to making a lyric. We start today with listening to silence and then describing sounds around us.

Enrichment Announcements: LA River Clean UP day, April 30th
Earth Day.


Waves, Wetlands and Water Sheds, California State Coastal Commission (Wildlife pictures)
Green Songbook, Alfred Music, Jessica Baron
Tales of Wind in the Willows, Barnes and Noble, Inc., Stella Maidment
Pasadena Water and Power, California Poppy, State Flower
Shower Timers, LADWP
LAUSD, SDAIE Criterion
On the Board today:

Pictures of Plants and Flowers with River and Creek
Words:
Outdoor Classrooms Map of local Riverbank or Park
Beaches near by
Geography of the Hiking Trails

Outdoor music and outdoor habits for safety
Linking the river back
To our studies and our Lives.
Water plants and
Sharing Water song

Invisible and visible forces:
Next week

Water Dance (Freedom and Constriction)
We can see water flowing and work with the watershed image on the wall to pretend we are a river together with a prop of a sparkling cape.

We can pretend there is a beaver dam and the water stops flowing like Ben Franklin’s snake.

We can’t see emotions but we can show them. We can also prevent accidents by thinking ahead about real problems that can arise.
Lesson Three- Finding community and purpose in your point of view

Finding purpose and community- Water Buddy Program is a 45 minute after-school program based on linking a musical version of Kenneth Grahame's *The Wind in the Willows* to enlivening STEM content from the State’s EEI Curriculum, the Coastal Commission Ocean Stewardship model, and state and local River Revitalization and Water Conservation programs.

**When:** 75 minutes weekdays between 3-6pm or mornings in school by arrangement  
**Who:** Two presenters (artist/educators)  
**What:** English Language Arts enriched through the lens of Science enlivened by Drama, Dance, Singing, Performance, and Composing  
**Why:** To improve student language arts fluency and school adaptation outcomes

Process: The Teacher Guide for the Day:

Every day has a warm inviting hello and a singing time. Every class has a highly enriched classroom, the dialogic images and study scaffolding support charts. Every class has solo and group responses. Every class has room for group invention on a theme, topic, thread, or section. Each program has an idea of the day and a group of vocabulary words.

Every class has the music tutor and the primer to read from either aloud singing with accompaniment or out loud in group or solo reading sections. Teacher/student activities can include questions and Bunce type interactions: focused contrasts, modeling, event casting, open questions, expansions, recasts and redirects or prompted initiations. Each class has a song or song choices, daily themes, movement and hand motions, and writing after an active activity.

Because the school day is so full the process of this activity has three beats: a) Activate the body; b) Still the mind, and c) Write. Writing and observation are the ways an instructor document student progress. Movement, toning, reading and vocalization, breathing and dancing are the way kids get to link thinking, higher order problem solving and relationships that use the neo-cortex in combination with motorskills and decoding and blending.

Traditional Class Strategies:

a) Foundational skills in language and literacy ( explicite, systematic instruction in vocabulary  
b) Incorporate home language if possible 
c) Alphabet knowledge, phonological awareness and print awareness  
d) Work with rhymes, syllables, recognizing sounds in words, matching sounds to letters  
e) Interactive games, listening experiences, spoken language arts, call and response  
f) Skills that can transfer across languages  
g) Make connections between what children know and what they need to know in whatever languages they use based on culture, observation, and interaction behaviors
(8 Strategies for Preschool ELL's Language and Literacy Development for Literacy Development, Karen Ford, 2010).

**Foundational Thought:**

Children require multiple exposures to words in order to develop a rich understanding of their meaning and use. Teachers should make a point of introducing interesting new words for children to learn into each classroom activity (Tabors, 2008).

**After-School Guidelines:** Enrichment and empowerment, choice and fun, mature play, not a replacement for teachers work, new ideas that build on existing skills, previous experience and dialogue, encouraging children to raise their hands, make choices, participate and work to collaborate with others using words, movements and drama/music/art/writing and/or combinations

**Enriched Classroom Design:**

Semicircle seats with writing/project tables, blackboard, poster display space, dry erase, open space to dance, electricity for music tutor, table for music supplies, instruments and props

**Wall Space:** Pictures of Habitats, Large Format Picture of the Ducks and Ratty Swimming and Mole when he falls out of the boat and is rescued by his friend

**Looking at relationships with wrappings**

Picture from *All the Way to the Ocean.*

We can have seasonal work like Spring Cleaning or we can take care of our streets like the children in the picture book decide to do.

**Classroom Design:** Semicircle of writing tables, dance space, black boards, white boards, Internet and bulletin boards
Enriched Classroom design, music tutor and instrument and prop area, regular format

**Music:** Voice, Cantillation, Music Tutor, Drum  
**Writing:** Pen and Paper  
**Instructors:** 2 Instructors

Reintroduction to Large Format Pictures of the First Four Lessons (Habitat, Ooops, Wildwood, and Spring Cleaning) (Rotate four large format pictures around the room for the first four units and habituate children to work with readings and return to different readings throughout the 30 unit course)

**Class plan:** 2:30-2:45pm  
Set up Room  
2:46-3:00 pm  
Start, 3:10 pm picture of the goose handout/write and think  
3:11-3:14 pm  
Hello, catch up, and look at picture of mole (group work) sounds in the meadow, animal talk and group discussion on picking up and house work  
3:15-3:30 pm  
Movement process (drum circle, name game, animal noises), drumming up reasons to pick up after ourselves  
3:31-3:45 pm  
Instructional part of the day, word wall, or song (kids vote)  
3:46-3:50 pm  
What is a communication? Describe sending signals as simple, but important messages.  
3:51-4:00 pm  
Reading of The Wind in the Willows easy section  
4:01-4:14 pm  
Word wall with burrows and miming habitat and messages lesson (new pictures of creek bed and trees)  
4:15-4:20 pm  
Writing Messages, Signalling Thoughts and Working with Symbols (board work), singing laughter exercise/breathwork (1 minute), reading aloud the lyrics of the Rainbow Song Lyric  
4:21-4:30 pm  
Picture of Mole in his Burrow Spring Cleaning, Write about the Raccoon picture with the garbage near the stream. Imagine LA River Clean up day and trash affects people, living things and habitat. What would you like to say about it?  
4:31-4:40 pm  
Read your sentences to the class, talk about the Trash book vocabulary  
4:41-4:45 pm  
Dialogic Discussion- Picture of the Raccoon (Show the class without words what you’d like to say in a symbol, in a story idea, in an enactment)  
Explain the idea by talking about different ways we can share thoughts without writing. (Example: I word messages/holding the hand up to say “Stop”. (children raise their hands one at a time or in groups with permission to do this exercise- or choose to end the day singing.)  
Vocabulary and Memory Section: Children drum the names of the plants and make a poem using the flower and plant
words (pictures of the plants available before writing to link picture to the word and spelling)

Hello Exercise, Process of Narrative and Communication- Purpose of the Singing Drum:
The Singing Drum Circle- Listening and Participating Game
Directions: (Drum your name command) Your Name (rhythm) and the others (drum it back), next student (their name) and the others drum it back. (seating in a circle on the floor students drum their names till everyone’s name is drummed out in rhythmic form. (variations - remember everyone’s name and drum the sequence, drum a sentence, drum a story)

Lesson on Communication:
(naming: Meadow, Rowing on the River, Alone in the Woods and White Washing-Wall Pictures)
(signing: for the pictures- talking with body)
(signalizing: for the pictures – talking without words)
(writing: s-p-e-l-l-i-n-g)
(drawings: pictographs)
(meaning making: sign (I love you), picture words (egyptian), symbols (japanese/chinese), mimickry (play acting), (scribe) (script) (administration, business and creator)

Wall Space: Pictures of Habitats (Bionomes) (Word List) (Shapes) (Colors) (Alphabetics, Kangi and Alphabet Chart, American Sign Language, Drum Rhythms, Hand Signals)

Dialogic Space: Picture of Mole white washing his home, “oh bother”, the opening scene of the book before Mole comes above ground

First Song: The World Around Me (The Riverbank and Mr. Mole)

Board Work: Rainbow Song/Mole’s feelings in a song
(Draw a picture of the story of the song)

Reading Work: Rainbow Song (talk about weather and rainbows, prisms and life underground)

Wiggle and Laughter Exercise: 1 minute of Wiggle and Laugh (Worm Exercise)

Prop: The Hoop as a door to the burrow, entering and leaving underground to join the above world: review words up, down, in, out, under, above and add descriptors and nouns. This becomes the tunnel game (below).

The Tunnel Game Script: …. (The meadow is bright, the meadow has birds…I’m leaving my burrow and I say…..”mime your message and have the students guess it”
Review

**Concept for the Day:** Modes of Expression- Narrative, Poetry, Music Chart, making short lines out of phonemes that come from what we are saying or seeing, preparation for haiku and for making lines up that can become lyrics or words to place in known melodies of songs

**Behaviors:** Review the Rules- How we operate in Water Buddy’s Habitat (safety, permission, quieting down, speaking or coming up in front of the room, respecting others)

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P.O.V. in a scene: We can pretend to understand, we can imitate others, we can see a problem, we can choose to take action.

Some of the kids will be wordless, so mime and telegraphic speech helps them to find a way to show what they know.

Writing, coloring, sounding, and miming allow kinesthetic and auditory learners, dual language learners and different style learners to participate and contribute as well as learn new words and ideas.

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**Extra Material and Choices for the Content:** Talk about singing and learning words

**Subjects:** Connections between Above and Below (Dolch +), start stringing together words and sounds and meaning.

**Recycling:** Urban and Rural Connections- pick up after yourself in the outdoors

**Respect:** Why pick up after yourself at home? Remember the Raccoon picture, what about the impact on your neighborhood?

**Neighborhood or Home Turf/Habitat:** What plants or flowers, birds or animals are in a meadow?

**Plant Study:** Willow- Along the Nile in Ancient Egypt and in California in Arroyo Seco Can you draw the LA River with plant pictures?

**Song:** Wind in the Willows Song-large format lyric sheets and handouts (see attached)
Drum the Names and Write a Poem Exercise:

Native Plant Species-
Willow, Sycamore, Mule Fat, Elderberry,
Cottonwood, White Alder, Cattail, Black Walnut, Mugwort

Invasive Plant Species-
Arrundo, Castor Bean, Tree of Heaven, Fennel,
Cocklebur, Palm, Mustard, Tamarisk, Shamel Ash

Pictures of plants on the wall, look at them, read their names aloud, play with the sounds and with names or nouns. Build sentences with weather and walking and seeing the landscape or the horizon.

On the left is a willow in ancient Egypt along the Nile.
APPENDIX B

REVIEWER QUESTIONS AND RESPONSES
ML/MA Project Questions-

Appendix B Questionnaire:

1. The curriculum is relevant to addressing the linguistic needs of third grade students.
   
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   
   Comments:

2. The curriculum is grounded in and supported by established theories of learning.
   
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   
   Comments:

3. The curriculum guide is well constructed in terms of goals, objectives, activities, and evaluation.
   
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   
   Comments:

4. The learning activities and content are engaging to 3rd grade students.
   
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   
   Comments:

5. The learning activities and content are appropriate for 3rd grade students.
   
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   
   Comments:

6. The curriculum approach is one I would recommend to others.
   
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   
   Comments:

7. Additional suggestions for improving the curriculum project:

   Musical Linguistics MA Questionnaire. C. Lebo 818-742-5099 bo_lebo@hotmail.com
Appendix B Questionnaire:

1. The curriculum is relevant to addressing the linguistic needs of third grade students?
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments:

2. The curriculum is grounded in and supported by established theories of learning?
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments:

3. The curriculum is well constructed in terms of goals, objectives, activities, and evaluation?
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments:

4. The learning activities and content are engaging to 3rd grade students.
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments:

5. The learning activities and content are appropriate for 3rd grade students.
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments:

6. The curriculum approach is one I would recommend to others.
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments:

7. Additional suggestions for improving the curriculum project:
Appendix B Questionnaire:

1. The curriculum is relevant to addressing the linguistic needs of third grade students?
   1 2 3 [4/5] 1 (lowest) - 5 (highest)]
   Comments:

2. The curriculum is grounded in and supported by established theories of learning?
   1 2 3 4 [5] 1 (lowest) - 5 (highest)]
   Comments:

3. The curriculum is well constructed in terms of goals, objectives, activities, and evaluation?
   1 2 3 [4/5] 1 (lowest) - 5 (highest)]
   Comments:

4. The learning activities and content are engaging to 3rd grade students.
   1 2 3 4 [5] 1 (lowest) - 5 (highest)]
   Comments:

5. The learning activities and content are appropriate for 3rd grade students.
   1 2 3 4 [5] 1 (lowest) - 5 (highest)]
   Comments:

6. The curriculum approach is one I would recommend to others.
   1 2 3 4 [5] 1 (lowest) - 5 (highest)]
   Comments:

7. Additional suggestions for improving the curriculum project:

   This program focuses on the required needs of primary children and satisfaction their basic energy nature with rewarding activities.
Appendix B Questionnaire:

1. The curriculum is relevant to addressing the linguistic needs of third grade students?
   5  [1 (lowest) - 5 (highest)]
   Comments:

2. The curriculum is grounded in and supported by established theories of learning?
   5  [1 (lowest) - 5 (highest)]
   Comments:

3. The curriculum is well constructed in terms of goals, objectives, activities, and evaluation?
   5  [1 (lowest) - 5 (highest)]
   Comments:

4. The learning activities and content are engaging to 3rd grade students.
   5  [1 (lowest) - 5 (highest)]
   Comments:

5. The learning activities and content are appropriate for 3rd grade students.
   5  [1 (lowest) - 5 (highest)]
   Comments:

6. The curriculum approach is one I would recommend to others.
   5  [1 (lowest) - 5 (highest)]
   Comments: With reservations
As a teacher I find the plan hard to visualize and follow. There are many activities and terms used that I am not familiar with. I would need a video overview of a class or an in-person observation of a class session in order to replicate this myself in a classroom of children.

7. Additional suggestions for improving the curriculum project:
Spell out activities in detail at least once, the first time that type of activity appears in a lesson plan. In subsequent plans it would only be necessary to spell out activities that are new. As an old school teacher I recognize the validity of these types of activities, but I would not be able to conduct a class based on this outline, as there is too much vocabulary used that I cannot understand. What does this look like and sound like when students are engaged in it? What does the teacher do? How is it modeled? What are students doing? A video of a class doing the specific activity would make it abundantly clear.

![Diagram](image_url)
Appendix B Questionnaire:

1. The curriculum is relevant to addressing the linguistic needs of third grade students?

   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: I found the curriculum to be captivating to the linguistic needs of 3rd graders.

2. The curriculum is grounded in and supported by established theories of learning?

   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: The work is supported by Gardner’s multiple intelligence theory.

3. The curriculum is well constructed in terms of goals, objectives, activities, and evaluation?

   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: The curriculum is very thorough.

4. The learning activities and content are engaging to 3rd grade students.

   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: The rhymes, sports movement, creative expression, all seem to be engaging to 3rd graders.

5. The learning activities and content are appropriate for 3rd grade students.

   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: Water conservation is a powerful way to introduce 3rd graders. I would be delighted to recommend the curriculum to other teachers.

6. The curriculum approach is one I would recommend to others.

   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: I would be delighted to recommend the curriculum to other teachers.

7. Additional suggestions for improving the curriculum project.

   Comments: Further involvement of the community would be beneficial.
ML/MA Project Questions-

Appendix B Questionnaire:

1. The curriculum is relevant to addressing the linguistic needs of third grade students?
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: Students will enjoy the choral activities, the drumming, the story enactments, play acting, singing which will all reinforce the acquisition of spoken language. The Wind in the Willows and the Water thematic lessons will be developmentally appropriate for third graders.

2. The curriculum is grounded in and supported by established theories of learning?
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: Activities in the curriculum support Howard Gardner’s Multiple Intelligences and Vygotsky’s Constructivist theories of learning.

3. The curriculum guide is well constructed in terms of goals, objectives, activities, and evaluation?
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: Activities are too compressed. Each lesson will take much longer to complete than the time allotted. I suggest one week for each lesson, rather than one day.

4. The learning activities and content are engaging to 3rd grade students.
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: Students will enjoy participating in the activities. Some will be shy. Others will emerge as dominant leaders with strong personalities. Transitioning from one activity to the next also takes some time. The students will like the singing, the musical drumming, the playacting, listening to stories being read to them. They will connect to the water theme, and the characters in the Wind in the Willows.

5. The learning activities and content are appropriate for 3rd grade students.
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: The thematic water unit will be something all kids will be able to relate to.

6. The curriculum approach is one I would recommend to others.
   1 2 3 4 5 [1 (lowest) - 5 (highest)]
   Comments: Daily changes to the classroom displays are not necessary. Set the stage to support the theme; then add an element or two daily for the duration of the unit. This will allow connectivity to the lessons form the day before. It will also provide a memory reference for the writing activity at the end of the week.

7. Additional suggestions for improving the curriculum project:
   slow down the pace. Allow time for human interaction and transitions between activities. Kids need time to think before they write. Write after all other activities have been completed as a

Musical Linguistics MA Questionnaire    C. Lebo  818-742-5099    bo_lebo@hotmail.com

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reflection of what they learned all week. Teacher needs to circulate around room to help with the writing process.
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Musical Linguistics MA Questionnaire  C. Lebo  818-742-5099  bo_lebo@hotmail.com
FW: lesson 2 sent, here's 1, and then 3

From:
Sent:
To:
Cc:

1 attachment
Appendix B Questionnaire (new).doc (52.5 KB)

From: 
Sent: 
To: 'bo lebo'
Subject: RE: lesson 2 sent, here's 1, and then 3

Here is the form Bo.

I enjoyed it and will talk next week.

The reason for a 4 and not a 5 with two of the question centered around

4. The learning activities and content are engaging to 3rd grade students (Hard to tell what would be engaging to this age group without some formal (maybe) developmental chart that indicated this age group's usual developmental activity likes and dislikes.

5. The learning activities and content are appropriate for 3rd grade students.
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</table>
Question 1- Rate 5
I found the curriculum to be captivating to the linguistic needs of 3rd graders.

Question 2- Rate 5
The work is supported by Gardner's multiple intelligence theory.

Question 3- Rate 5
The curriculum is very thorough in identifying goals, objectives, activities and evaluations.

Question 4- Rate 5
The rhymes, sounds, movement, creative expression, all seem to be engaging to 3rd grade students.

Question 5- Rate 5
Water conservation is a powerful and direct way to introduce 3rd graders to issues of personal and community involvement.

Question 6- Rate 5
I would be delighted to recommend this curriculum to others.
Question 1- Rate 5
Question 2- Rate 5
Question 3- Rate 5
Question 4- Rate 5
Question 5- Rate 5

Question 6- Rate 5 with reservations
As a teacher, I find the plan hard to visualize and follow. There are many activities and terms used that I am not familiar with. I would need a video overview of a class or an in-person observation of a class session in order to replicate this myself in a classroom of children.

Question 7- Additional suggestions for improving the curriculum project: spell out activities in detail at least once, the first time that type of activity appears in a lesson plan. In subsequent plans it would only be necessary to spell out activities that are new. As an old school teacher I recognize the validity of these types of activities, but I would not be able to conduct a class based on this outline as there is too much vocabulary used that I cannot understand. What does this look like and sound like when students are engaged in it? What does the teacher do? How is it modeled? What are the students doing? A video of a class doing the specific activity would make it abundantly clear.

Question 1- Rate 5
Students will enjoy the choral activities, the drumming, the story enactments, play acting, singing, which will all reinforce the acquisition of spoken language. 'The Wind in the Willows and the Water thematic lessons will be developmentally appropriate for third graders.'

Question 2- Rate 5
Activities in the curriculum support Howard Gardner's Multiple Intelligences and Vygotsky's Constructivist theories of learning.

Question 3- Rate 3
Activities are too compressed. Each lesson will take much longer to complete than the time allotted. I suggest one week for each lesson, rather than one day.

Question 4- Rate 5
Students will enjoy participating in the activities. Some will be shy. Others will emerge as dominant leaders with strong personalities. Transitioning from one activity to the next also takes some time. The students will like the singing, the musical drumming, the play acting, listening to stories being read to them. They will connect to the water theme, and the characters in the Wind in the Willows.

Question 5- Rate 5
The thematic water unit will be something all kids will be able to relate to.

Question 6- Rate 4
Daily changes to the classroom displays are not necessary. Set the stage to support the theme: then add an element to two daily for the duration of the unit. This will allow connectivity to the lessons form the day before. It will also provide a memory reference for the writing reference for the writing activity at the end of the week.

Question 7- Comments
Slow down the pace. Allow time for human interaction and transitions between activities. Kids need time to think before they write. Write after all other activities have been completed as a reflection of what they learned all week. Teacher needs to circulate around room to help with the writing process.

Question 1- Rate 5
Question 2- Rate 5
Question 3- Rate 5
Question 4- Rate 5
Question 5- Rate 5
Question 6- Rate 5
Question 7- No comments yet

Question 1- Rate 5
Question 2- Rate 5
Question 3- Rate 5

Question 4- Rate 4

The learning activities and content are engaging to 3rd grade students, but hard to tell what would be engaging to this age group without some formal (maybe) developmental chart that indicated this age group's usual developmental activity likes and dislikes.

Question 5- Rate 4

The learning activities and content are appropriate for 3rd grade students.

Question 6- Rate 5

Question 1- Rate

Question 2- Rate

Question 3- Rate

Question 4- Rate

Question 5- Rate

Question 6- Rate

Question 7

These activities give active children something to do that fits their natures. It allows them to focus on the material at hand. It engages the part of children that is very energetic and helps them to focus.
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APPENDIX C

SUPPLEMENTAL MATERIALS
Then Mole stopped suddenly. An old, familiar, half-forgotten smell had come to him. It was the smell of home!

"Wait, Ratty, wait!" he cried.

But Rat kept plodding on. Mole ran behind him, torn with grief. At last Rat turned and saw his sobbing friend.

"What's up?" he asked.
Many times Ratty said to Mole, “Do not go into the Wild Wood alone.” But Mole was curious. One day while Ratty was asleep, he went out alone.

He walked alone to the Wild Wood. He stood alone looking at the Wild Wood. He was alone when he went into the Wild Wood. Then a strange thing happened. He wasn’t alone any more.

The faces began. Over his shoulder he thought he saw a face. When he turned it was gone.

Then the whistling began. First it was up ahead. Then it was behind. He didn’t know which way to turn.

Then the footsteps began. They sounded like rain at first. Then they got louder and faster. Something was running. Something or someone was running hard.

Mole began to run too. He ran this way. He ran that way. He ran into things. He fell over things. At last he hid in the hollow of a big tree.

Then he knew why Ratty had said, “Do not go in there alone.” He knew the Terror of the Wild Wood.
Habitat, Habitat, have to have a habitat,
Habitat, Habitat, have to have a habitat,
Habitat, Habitat, have to have a habitat,
Have to have a habitat to carry on.
Have to have a habitat to carry on
Have to have a habitat to carry on.
The World Around Me

now I see what spring can really do...

takes the love you whispered, makes you want to shout it, that's the greatest thing about it. So, you see, The World Around Me must be waiting for my company, and I guess it's really not all surprising that this enterprising soul should be the lucky one who gets to see The World Around Me.
The World Above Me
from The Wind In The Willows  
William Elliott  
[Arranger]

Bass Drum

Voice

Here it is— the world above me, how could I have known, how bright it is, how the early morning sun will make it sparkle.

B. Dr.

how the meadow lark will lead the singing. There must be a thousand voices calling everyone to welcome me—someone must have spread the news of my arrival.
William Elliott

The Wind In The Willows

For voice and percussion

Percussion

\( \text{WALTZ} \)

Voice

The Wind In The Willows is saying this morning for

Perc.

continue

you something saw is beginning this morning. The moment it

Perc.

whispers to you then it's true, but how you must listen and listen and

Perc.

listen, The Wind In The Willows is saying this morning you have all you
The Wind In The Willows

William Elliott

G Em7 Am7 D7

The Wind In The Willows is saying this morning, for

Am7 D7 G C/G G C

you something new is beginning this morning. The moment it

Cm Bm Am G Ebybb Ebbybb Ebbybb Cm7 Cm6

whispers to you then it’s true, but how you must listen and listen and

Daug D7 G Em7 Am7 D7 Am7

listen, The Wind In The Willows is saying this morning, you have all you

D7 G C/G G C Cm6 Bm7

need for beginning this morning, and if you believe it you will see

Em7 Am7 C/D D G

you’ll be like The Wind In The Willows, free
Flowing, flowing,
River always going
Touching all things growing
Bringing life to me
Bringing life to me.

Winding, winding
Oak and acorn finding
Sage and willow binding
Bringing life to me
Bringing life to me.

Rolling down our hillsides
Sounds of rain and good times
Bending as a fish glides
Frogs and toads, mud in toes, and

Following the headlands
Washing many creek sands
Rushing on to seek lands
Far below, far below, then

Flowing, flowing
River always going
Touching all things growing
Bringing life to me
Bringing life to me.
The Riverbank Band Brigade
from The Wind In The Willows
William Elliott

\( \text{\textit{March.}} \)

Voice

\( \text{An\-y \-time, an\-y \-where, an\-y \-trou\-ble and \-we'll \-be \-there. \textit{It's}} \)

Perc.

\( \text{time \ to \ call \ on \ us \ the \ Riverbank Band Brigade \ in \ a \ pinch, \ in \ a} \)

Perc.

\( \text{scare, \ in \ a \ thing \ that \ - \'il \ raise \ your \ hair, \ the \ task \ - \ will \ fall \ on \ us.} \)

Perc.

\( \text{Riverbank Band Brigade \ The \ trumpets \ call \ and \ we \ are \ ready} \)
River Flowing

Percussion

Voice

Perc.

Perc.

Perc.

W.Elliot / C.Lebo

\( j = 130 \)

\[ \text{SAMBA} \]

Flow - ing   flow - ing   ri - ver al - ways go - ing
Wind - ing   wind - ing   oak and a - corn bind - ing

\( \text{touch - ing all things} \)
\( \text{grow - ing} \)
\( \text{bring - ing life to} \)
\( \text{me} \)

\( \text{bend - ing as} \)
\( \text{a} \)
\( \text{fish} \)
A PERFECT MOLE / I WANT TO SEE THE RAINBOW

I’m a mole, I’m a mole,
Yes I am, a perfect mole,
I don’t aspire to the world that lies above me,
I don’t enquire about anything that has to do with early spring
Or sunny skies or windy days,
I’m so content in many ways that you would have to give me praise
And say that I’m the perfect mole
Who took to moling heart and soul,
A perfect mole...a perfect mole...a perfect mole...

But I want to see the rainbow,
There’s something called a rainbow,
It’s made of all the colors in the world,
And the blues melt into orange and the purples into red,
And yellows seem much brighter when they’re higher overhead,
You look up high to see the rainbow,
In the sky to see the rainbow,
That’s why I might never see the rainbow.

Sky is blue, earth is brown,
Up is up, and down is down,
I have to be the one who carries on tradition,
I mustn’t think of going anywhere that has to do with open air
Or starry nights or sunny days,
I’m faithful in so many ways that you would have to give me praise
And say that I’m the perfect mole
Who took to moling heart and soul,
A perfect mole...a perfect mole...a perfect mole...

But I want to hear the willows,
The sound that’s in the willows,
And how they whisper on a windy day,
Is it just imagination or a wish that it be true?
But when they start to whisper are they saying things to you?
That’s what I’ve heard about the willows,
And you never doubt the willows,
Wind is just the wind without the willows.
The Rainbow Song

William Elliott

I'm a mole, I'm a mole, yes I am, a perfect mole.

Sky is blue, earth is brown, up it is up, down it is down.

I have to be the one who carries on tradition, I don't even quire about anything that has to do with early spring or sunny skies or wintry days, I'm faith-ful in so many ways that you would have to give me praise and say that I'm the perfect mole.

Who took to mole-ling heart and soul, a perfect mole, a perfect mole.

But I want to see the rainbow, there's something called a rainbow, it's made of all the colors in the world, and the blues melt into orange and the purples into red, and yellows seem much brighter when they're high over your head, you wish that it be true, but when they start to whisper are they saying things to you? that's why I might never see the rainbow.

Look up high to see the rainbow, in the sky to see the rainbow, wind is just the wind without the willows, get out, I'm going to see the rainbow.
consume
To use goods produced by nature or people.

extract
To take something from its surroundings, such as metal from rocks.
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