

# WHY MUSIC ?

## Facts and Statistics

**The U.S. Department of Education recommends** the arts to college-bound middle and junior high school students asserting, “Many colleges view participation in the arts and music as valuable experience that broadens students’ understanding and appreciation of the world around them.” In addition, it plays a part in developing “children’s intellectual development.” The U.S. DOE also suggests one year of Visual and Performing Arts for college-bound high school students. (*Source: Getting Ready for College Early: A Handbook for Parents of Students in the Middle and Junior High School Years, U.S. Department of Education, 1997*)

**The arts are one of the six subject areas** in which the College Board recognizes as essential in order to thrive in college. (*Source: Academic Preparation for College: What Students Need to Know and Be Able to Do, 1983 [still in use], The College Board, New York* )

**The arts produce jobs**, generating an estimate \$37 billion with a return of \$3.4 billion in federal income taxes. (*Source: American Arts Alliance Fact Sheet, October 1996* )

**Students taking courses in music performance** and music appreciation scored higher in the SAT than students with no arts participation. Music performance students scored 53 points higher on the verbal and 39 points higher on the math. Music appreciation students scored 61 points higher on the verbal and 42 points higher on the math. (*Source: 1999 College-Bound Seniors National Report: Profile of SAT Program Test Takers, The College Entrance Examination Board, Princeton, New Jersey*)

**According to the National Education Longitudinal Study of 1988**, music students received more academic honors and awards than non-music students. A higher percentage of music participants received As, As/Bs, and Bs than non-music participants. (*Source: NELS:88 First Follow-up, 1990, National Center for Education Statistics, Washington D.C.*)

**Lewis Thomas, physician and biologist, found that music majors** comprise the highest percentage of accepted medical students at 66%. (*Source: As reported in “The Case for Music in the Schools,” Phi Delta Kappan, February 1994.*)

**Research made between music and intelligence** concluded that music training is far greater than computer instruction in improving children’s abstract reasoning skills. (*Source: Shaw, Rauscher, Levine, Wright, Dennis and Newcomb, “Music training causes long-term enhancement of preschool children’s spatial-temporal reasoning,” Neurological Research, vol. 19, February 1997* )

**The University of Montreal researched brain imaging techniques** to study brain activity during musical tasks. Researches concluded that sight-reading musical scores and playing music “activate regions in all four of the cortex’s lobes” and “parts of the cerebellum are also activated

during those tasks.” (Source: J. Sergent, E. Zuck, S. Tenial, and B. MacDonnall (1992). *Distributed neural network underlying musical sight reading and keyboard performance. Science, 257, 106-109.* )

**Researchers in Leipzig discovered through the use of brain scans** that musicians had larger planum temporale, the region of the brain associated with reading skills. Also, musicians had a thicker corpus callosum, the nerve fibers that connect the two halves of the brain. (Source: G. Schlaug, L. Jancke, Y. Huang, and H. Steinmetz (1994). “In vivo morphometry of interhemispheric asymmetry and connectivity in musicians.” In I. Deliège (Ed.), *Proceedings of the 3rd international conference for music perception and cognition* (pp. 417-418), Liege, Belgium. )

**“The arts enrich communities and employees,** and also stimulate the kind of intellectual curiosity our company needs to stay competitive.” (Source: Norma R. Augustine, Chairman and Chief Executive Officer, Martin Marietta Corporation.)

**“A grounding in the arts will help our children** to see; to bring a uniquely human perspective to science and technology. In short, it will help them as they grow smarter to also grow wiser. (Source: Robert E. Allen, Chairman and Chief Executive Officer, AT&T Corporation, in “America’s Culture Begins with Education”)

**This data is excerpted from Music Makes the Difference: Music, Brain Development, and Learning which is MENC publication #1668 and may be purchased at the MENC website at [www.menc.org](http://www.menc.org).**

**Arts Education aids students in skills needed in the workplace:** flexibility, the ability to solve problems and communicate; the ability to learn new skills, to be creative and innovative, and to strive for excellence. (Source: Joseph M. Calahan, Director of Corporate Communications, Xerox Corporation)

**I believe arts education in music, theater, dance and the visual arts is one of the most creative ways** we have to find the gold that is buried just beneath the surface. They (children) have an enthusiasm for life, a spark of creativity, and vivid imaginations that need training...training that prepares them to become confident young men and women. As I visit schools around the country I see a renewed interest in arts education and a growing concern about the negative impact of cutting art and music out of curriculum. The creativity of the arts and the joy of music should be central to the education of every American child. (Source: Richard W. Riley, U.S. Secretary of Education)

**Music is Beating Computers at Enhancing Early Childhood Development.** Music training, specifically piano instruction, is far superior to computer instruction in dramatically enhancing children's abstract reasoning skills necessary for learning math and science. Learning music at an early age causes long-term enhancement of spatial-temporal reasoning. (Source: Frances Rauscher, Ph.D., Gordon Shaw, Ph.D., University of California, Irvine, 1997)

**Music Enhances Linguistic Skills.** Music -- specifically song -- is one of the best training grounds for babies learning to recognize the tones that add up to spoken language. (Source: Sandra Trehubn, University of Toronto, 1997)

**America Is a Country Full of Music-Makers.** 113 million, or 53% of Americans over the age of 12 are current or former music makers. (Source: 1997 "American Attitudes Towards Music" poll conducted by the Gallup Organization)

**Americans Say Schools Should Offer Instrumental Music Instruction** as part of the regular curriculum. 88% of respondents indicated this in a 1997 "American Attitudes Towards Music" Gallup poll. (Source: *Music Trades*, September 1997)

**Student involvement in extracurricular or cocurricular activities makes students resilient to current substance use** among their peers, according to a recent statewide survey of Texas Schools. Secondary students who participated in band, orchestra or choir reported the lowest lifetime use of all substances. (Source: 1994 Texas School Survey of Substance Abuse Among Students: Grades 7-12)

**Studying Music Strengthens Students' Academic Performance.** Rhode Island studies have indicated that sequential, skill-building instruction in art and music integrated with the rest of the curriculum can greatly improve children's performance in reading and math. (Source: "Learning Improved by Arts Training" by Martin Gardiner, Alan Fox, Faith Knowles, and Donna Jeffrey, *Nature*, May 23, 1996)

**Music and Spatial Task Performance: A Casual Relationship.** Music lessons, and even simply listening to music, can enhance spatial reasoning performance, a critical higher-brain function necessary to perform complex tasks including mathematics. ( Source: Frances Rauscher, Ph.D., Gordon Shaw, Ph.D., University of California, Irvine, 1994)

**The Mozart Effect** surfaced about four years ago when research uncovered that adults who listened to music of complexity for ten minutes or so experienced temporary increases in their spatial IQ scores. ( Source: Frances Rauscher, Ph.D., Gordon Shaw, Ph.D., University of California, Irvine, 1994)

**Music Is One of Our Greatest Economic Exports.** "The arts are an economic plus -- second only to aerospace as our most lucrative national export." (Source: Michael Greene of *The National Academy of Recording Arts and Sciences*)

**Teacher Expertise in Music is a Critical Factor in Student Learning.** Research indicates that teachers of all subjects -- including music -- who are more experienced and educated are more effective in the classroom. Consequently, students learn more from them. (Source: *Paying for Public Education: New Evidence on How and Why Money Matters*, by Ronald Ferguson, 1991)

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## **Frequently Asked Questions**

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### **Why Teach Music and the Arts?**

Music and the Fine Arts have been a significant portion of every culture's educational system for more than 3,000 years.

The Arts are the only way humans learn and judge other cultures or ages.

The human brain has been shown to be "hard-wired" for music; there is a biological basis for music being an important part of human experience.

Music and the Arts surround daily life in our present day culture.

Most present day artists, architects, and musicians acquired their interests during public school Fine Arts classes.

Only by continuing to allow students to explore these ways of learning will this portion of the economy continue to grow.

Education without the Fine Arts is fundamentally impoverished and subsequently leads to an impoverished society.

### **What about the claimed benefits of music education on other portions of the academic curriculum?**

The most rigorous review of all studies (Reviewing Education and the Arts Project Report (REAP)) shows there are significant, reliable causal relationships between the systematic, formal study of music and gains in mathematics and in spatial-temporal relationships.

Brain studies show the development of more extensive neural connections in musicians.

### **Should Music and the Arts be used to teach other academic subjects?**

While studies show positive influences in other academic areas, music and the Fine Arts are an academic discipline that are, as the other academics, an independent way of learning and knowing.

Reading, writing, and mathematics are important and all students should be successful in those areas, however none of those academic areas justify their existence on the basis of what is accomplished for another area. Each academic discipline is important for a well-rounded curriculum.

Music and Fine Arts are an academic area of study equal to reading, writing, mathematics and science.

### **Should the study of Music and the Fine Arts be available to all students?**

Where music and Fine Arts programs have been eliminated because of funding difficulties, students have been deprived of a significant opportunity of learning and knowing about the world around them.

All students should be able to “elect” to study music and the Fine Arts in depth at the secondary level.

All students should have the opportunity to study music at the elementary level in a systematic, meaningful way.

If music and the Fine Arts are reserved for only wealthy schools or communities, a cultural “elite” will be created, which also creates a significant distinction of social class.

Music and the Fine Arts should not only be available to those children of wealthy parents who can purchase private tutors or subsidize public schools with donations to sustain public school programs, but also to students of average or low socio-economic areas.

### **Should Music and the Fine Arts should be reserved only for those students who have demonstrated their “talent?”**

Magnet schools and magnet programs are wonderful for students exhibiting their skill at an early age, but many students do not realize their talent at early ages. Without opportunities in elementary, middle or high schools many students will miss developing their creative and/or artistic abilities.

Districts or communities relying on solely on magnet programs and exclude or reduce Fine Arts in other district schools deny many students the chance to develop this way of knowing and learning.

### **How should Music and the Fine Arts fit into the Florida educational curriculum?**

Florida school curriculum should be designed to deliver more than a minimal education to Florida students.

Music and Art should be taught at every elementary school in a regular and systematic way.

Music and all Fine Arts should be considered “academic electives” in secondary schools and available to all students on a multi-year basis to allow adequate time for skills to develop sufficiently for informed decisions about college programs and career choices.

All academic electives, including Music and Fine Arts, should count towards entrance requirements in Florida colleges and universities.

All students graduating from Florida schools should have received at least one credit in Fine Arts.

All Florida colleges and universities should require one Fine Arts credit for admission.

### **How should accountability be demanded so that Fine Arts courses meet rigorous requirements?**

There are already in place Sunshine State Standards for the Arts, and schools should be required to demonstrate compliance with the benchmarks already defined.

Rigorous music performance assessments are already in place and administered by the Florida School Music Association (see State Music Performance Assessment Report, 2001,). That association, which governs interscholastic music activities in Florida, will be developing assessments that are inclusive of all of the elements of the Sunshine State Standards. The other state Fine Arts associations are in the process of developing similar assessments.

### **Action needed**

Make certain your advocacy network in your county is strong and that communication systems are in place for rapid use.

Network with all Fine Arts educators and advocates on your campus.

Network with all levels of Fine Arts educators in your school system (elementary – middle – high school – college).

Use these talking points to communicate with your state legislators and let them know how important Music and the Fine Arts are to you. Ask for their support for legislation that will ensure the Fine Arts' place in the K-12 curriculum, and the funds to support those programs.

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#### The Arts Make Cents

The Arts have a positive impact not only on a community's quality of life, but also on its bottom line.

A recent study by the National Assembly of Local Arts Agencies (NALAA) documented the economic importance of the nonprofit arts on communities. The three year study surveying nearly 800 nonprofit arts organizations in 33 communities in 22 states, concluded that the arts are a thriving industry and "an economically sound investment for communities of all sizes."

The NALAA report estimated that nonprofit arts organizations generate:

1.3 million jobs annually

\$25.2 billion in personal income  
\$790 million in local government revenues  
\$1.2 billion in state government revenues  
\$3.4 billion in federal income tax revenues

In terms of national impact, the nonprofit arts were found to compose a \$36.8 billion industry in the United States. That number jumps to \$314 billion when the commercial arts sector is added.

**Source: National Assembly of Local Arts Agencies. Arts in the Local Economy Final Report, Washington D.C., 1994**

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### **How Arts Education Builds the Skills that Business Values**

An education in the arts encourages high achievement.

Study of the arts encourages a suppleness of the mind, a toleration for ambiguity, a taste for nuance, and the ability to make trade-offs among alternative courses of action.

Study of the arts helps students to think and work across traditional disciplines. They learn both to integrate knowledge and to "think outside the box."

An education in the arts teaches student how to work together cooperatively.

An education in the arts builds an understanding of diversity and the multi-cultural dimensions of our world.

An arts education insists on the value of content, which helps students understand "quality" as a key value.

An arts education contributes to technological competence.

**Source: Business Week, October 28, 1996**

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### **Impact of the Arts**

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### **The Impact of the Arts on Learning from Champions of Change**

**Involvement in the arts and academic success.**

Positive academic developments for children engaged in the arts are seen at each step in the research - between 8th and 10th grade as well as between 10th and 12th grade. The comparative gains for arts-involved youngsters generally becomes more pronounced over time. Moreover and more important, these patterns hold for children from low socio-economic status (SES) backgrounds.

### **Music and mathematics achievement.**

Students who report consistent high levels of involvement in instrumental music over the middle and high school years show significantly higher levels of mathematics proficiency by grade 12. This observation holds both generally and for low SES students as a subgroup. In addition, absolute differences in measured mathematics proficiency between students consistently involved versus not involved in instrumental music grow significantly over time.

### **Theater arts and human development**

Sustained student involvement in theater arts (acting in plays and musical, participating in drama clubs, and taking acting lessons) associates with a variety of development for youth: gains in reading proficiency, gains in self concept and motivation, and higher levels of empathy and tolerance for others. Our analyses of theater arts were undertaken for low SES youth only. Our presumption was that more advantaged youngsters would be more likely to be involved in theater and drama because of attendance at more affluent schools and because of parental ability to afford theater opportunities in the community or private sectors.

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