

Mind Over Music **STE[+a]M**

The Phoenix Symphony has been and continues to be a vital part of Arizona's arts and culture sector. By igniting the mind, the Arts can spark new ways of thinking, communicating and doing business. This includes pursuing new funding collaborations, partnerships and operating models to enhance and expand our education outreach programs.

WHY THE NEED FOR MUSIC INTEGRATION

National studies show that music can boost student achievement in all subjects, and yet, according to the Arizona Department of Education's 2010 Arts Education Census:

- 50% of Arizona schools have NO budget for arts education curriculum support, the majority of which are located in higher poverty districts;
- 79% of Arizona schools spend less than \$1 per student per YEAR – or less than half a penny per day on the arts; and
- 134,203 students (or 13% of the student population) attend Arizona schools each day without access to music or visual art.

In evaluation of the data presented in the 2010 Arts Education Census, The Phoenix Symphony made the decision to move beyond field trips to provide a curriculum-based program that would yield quantitative data supporting the importance of music. Under the direction of the new Director of Education & Community Outreach, in consultation with Symphony musicians, we launched *Mind Over Music*, a STE[+a]M (science, technology, engineering, arts, math) centered professional development model in which classroom teachers, symphony musicians, music and resource specialists are trained to integrate music into STEM concepts through both live and digital music. Through *Mind Over Music*, the Symphony is taking a leadership role in strengthening music education in Arizona schools; establishing the power of music as an effective instructional tool for learning STE[+a]M concepts; and investing in rigorous scientific evaluation to provide data for stakeholders, policymakers and the general public documenting the importance of music as a needed and prominent component of the core curriculum. Funding will allow us to make significant progress in moving forward with this innovative and groundbreaking model.

PROJECT DESCRIPTION

Teacher training will encompass all-staff professional development and grade-level/one-on-one coaching. All-staff training will be delivered through full and half-day in-services in the fall and spring of each school year. Content will focus on music fundamentals; lesson design; instructional strategies for both live and digital music integration; and assessment. Nationally recognized clinicians from the Kennedy Center, Phoenix Symphony musicians, guest artists and Symphony staff will deliver training.

Delivery of music integrated instruction in all classrooms will occur primarily through the adoption *Quaver's World of Music* (www.quavermusic.com/ParentTeacher/index.html) an interactive music education website that features webisodes exploring music fundamentals, technique, vocabulary, and composers; interactive games and apps; and space for students to compose and share original music. By approaching music integration through both live and digital means, teachers will be empowered to deliver content that is academically rigorous, developmentally appropriate and rich in opportunities for students to create, perform and respond in and through music.

While *Mind Over Music* is a teacher-training model, students will benefit from experiential hands-on music activities woven into STE[+a]M lessons, increasing opportunities to explore and understand music skills and concepts and how they connect to other content areas. Performance opportunities for students will also be enhanced through side-by-side concerts with Symphony musicians; classroom-centered music performances; and conductor and musician-led master classes. This interaction will instill in students an awareness of music as a career option and an understanding of the dedication and responsibility it takes to become a professional musician. Students, parents and faculty will also be provided with free admission to all *Symphony for the Schools* concerts and targeted main stage concerts throughout the year.

As collaboration is vital to the success of any arts integration model, school planning schedules have been altered to allow grade level and resource faculty collaborative planning time with music specialists and Symphony musicians for lesson development. Twice per year, teachers will team-teach lessons alongside Symphony musicians. Teachers will also receive one-on-one coaching from Symphony musicians through lesson demonstrations featuring live music and/or digital music using iPods and iPads as tools for incorporating technology into instruction.



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WHO WILL BE SERVED

The Symphony's primary criteria for school selection to include: Students residing in an economically repressed, targeted redevelopment area; Title 1 designation; general music classes offered but readiness to establish instrumental programs; willingness to establish a professional learning community among teachers to support arts integration; providing no specialized curriculum or enrichment programs (Reading First, International Baccalaureate, Dual Language) that might interfere with data collection and ability to commit to a rigorous, three-year evaluation component.

MEASURABLE RESULTS

As a three-year model, *Mind Over Music* will utilize an independent, external evaluator to implement a quasi-experimental design with internal treatment and control groups. The program evaluation plan addresses both teacher and student impact, with instruments measuring growth in music knowledge, understanding and retention of a STE[+a]M concepts, and teacher process and practice. Expected measurable results are:

- Teacher and student demonstration of an increased understanding and retention of STE[+a]M concepts, music fundamentals, vocabulary and skills as a result of live and digital music integration each year.
- Music specialists will construct integrated lessons and employ instructional strategies that demonstrate well-balanced, music-rich content.
- Executable, STE[+a]M integrated lessons will be created and taught year-round. Demonstration of teacher skill level to research, design and implement live and/or digital STEAM integrated lessons.
- Administration of *classroom-embedded assessments* -- includes pre- and post-tests; vocabulary quizzes; writing prompts/student reflection; experiential "creation" projects measuring dual content knowledge and group interaction.
- *State-administered achievement tests* will be examined and used to chart growth in science and math. A contrast control group consisting of an elementary school that mirrors the student demographics will be used to compare state-administered achievement test scores/benchmarks in math and science.