



What You Get When You Mix Arts with Science

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It was a classic “win-win” on display when Secretary Duncan visited a preschool classroom at Brightwood Elementary School in Northwest Washington, D.C., recently. The children were learning concepts in science through music and dance. Nationally, in many schools and districts science is not taught in the elementary grades, much less in preschool. And based on a recent Department of Education report on arts education, in many places, particularly urban school districts, the arts are missing as well in early learning.



Teacher Kalpana Kumar-Sharma and her students make arts and science connections through music. (Department of Education photo by Leslie Williams)

Secretary Duncan, accompanied by D.C. Schools Chancellor Kaya Henderson, visited teacher Kalpana Kumar-Sharma’s classroom to see how an innovative approach to combining the arts and science is working as the result of an OII arts education grant to the Wolf Trap Institute for Early Learning in the Arts. Like many other Wolf Trap early learning programs, [Early Childhood STEM Learning Through the Arts](#) (Early STEM/Arts) pairs a teaching artist who is skilled in arts integration with the preschool teacher.

While Brightwood Elementary is not explicitly a STEM or arts focused school, Artist Laura Schandelmeier has been visiting the Brightwood classroom weekly for several months to collaborate with Ms. Kumar-Sharma on lessons that combine dance and music with science. Based on the model that has evolved over the past three years in nearby Fairfax County preschool classes, the goal is to leave Ms. Kumar-Sharma with an understanding of arts integration and the skills and confidence to implement future integrated lessons on her own. Click [here](#) to read an OII home page article about the Early STEM/Arts project funded by the [Arts in Education Model Development and Dissemination](#) (AEMDD) grants program.



Wolf Trap Teaching Artist Laura Schandelmeier leads the preschoolers in an arts-integrated activity. (Department of Education photo by Leslie Williams)

Following the classroom visit, Secretary Duncan joined the leader of ED's [Office of Early Learning](#), Deputy Assistant Secretary Libby Doggett, OII's acting assistant deputy secretary, Nadya Dabby, and a group of stakeholders that included representatives of arts and science education, early childhood education, career-readiness, and the D.C. Public Schools' preschool-for-all initiative for a roundtable discussion. The Wolf Trap program is a "win" for science and STEM generally, according to retired General (Ret.) Lester L. Lyles, because it "infuse[s] the idea that science, technology, and math are fun, not something to be afraid of." As an engineer and Wolf Trap Foundation board member, Lyles sees the program as an ideal way to focus on STEM concepts in preschool.



D.C. Schools Chancellor Kaya Henderson (left) and Secretary Duncan congratulate Ms. Kumar-Sharma. (Department of Education photo by Leslie Williams)

The approach “returns the joy” to the classroom, noted Jesus Aguirre, D.C. state superintendent of education, but it also enables Kumar-Sharma and her colleagues to teach foundational principles in science and engineering, such as incline and patterning, in developmentally appropriate ways that the children internalize because of multi-sensory learning through movement, sound, and dramatic play. “It’s just like magic, the way they learn, the way they open up,” according to Kumar-Sharma.

Secretary Duncan noted that this kind of program is needed across the country. And, in fact, in this final year of its AEMDD grant support, Wolf Trap is disseminating lessons learned from the Early STEM/Arts piloting in the D.C. metro area to its [16 regional programs](#). A final evaluation report, which will look at the impact of the arts-integrated approach on preschool and kindergarten students, will be disseminated in 2014, when the four-year grant concludes.

After the event, OII Acting Assistant Deputy Secretary Nadya Dabby reflected that being reminded by Kumar-Sharma about how eager and brilliant our youngest schoolchildren are when offered rigorous, varied, and engaging instruction was truly inspiring.

Doug Herbert is a special assistant in the Office of Innovation and Improvement.

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