# early childhood **STEM LEARNING** through the arts **WORKS**

## IT WORKS!

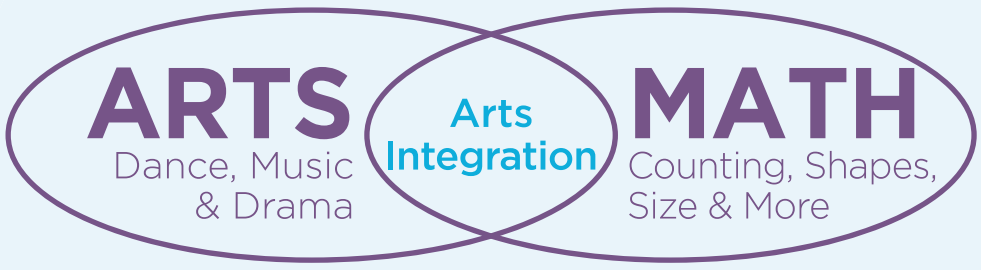
Wolf Trap's model increases an average student's math rank by **7-8 PERCENTILES**[2]

Wolf Trap students have **HIGHER math achievement**[1]

**EARLY MATH SKILLS** are the strongest predictor of later academic achievement[4]

## WHY

**CHILDREN LEARN BEST BY DOING** - the arts and STEM are natural partners




**RHYTHMS/PATTERNS=PRE-ALGEBRA**


## HOW

Each teacher receives up to **101 HOURS** of PROFESSIONAL DEVELOPMENT

Teacher
+ Wolf Trap Teaching Artist
+ Wolf Trap Professional Development

## BETTER MATH KNOWLEDGE

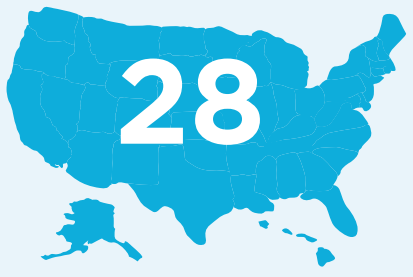
Wolf Trap teachers scored **62% HIGHER** on overall arts integration measures, and 150% higher in linking arts with math[3]

## The Wolf Trap APPROACH


of classroom residencies with **WOLF TRAP** teaching artists

Teacher training, teacher and teaching artist **COLLABORATION**

INSTRUCTIONAL content aligned **TO NATIONAL AND STATE STANDARDS**




**STATES** INCLUDING **17 AFFILIATE SITES**

WOLF TRAP
FOUNDATION FOR THE PERFORMING ARTS


SOURCES

1. Interpretations derived from results of a four-year study of Wolf Trap's Early Childhood STEM Learning Through the Arts. Ludwig, M. and Song, M., (2014). "Final Report: Findings from the Evaluation of the Wolf Trap Arts in Education Model Development and Dissemination Grant," American Institutes for Research.
2. Ibid. Based on effect sizes of .17 in first year, and .21 in second year of Wolf Trap program. See pg. 16.
3. Ibid. See pg. 16, Exhibit 9.
4. Duncan, G. J., Dowsett, C.J., Classens, A., Magnuson, K., Huston, A.C., Klebanov, P., et al. (2007). School readiness and later achievement. Developmental Psychology, 43, 1428-1446.