



ALLEY ARTS INTEGRATION NETWORK



TRENDS IN NEUROSCIENCE AND EDUCATION: THE EFFECTS OF ARTS-INTEGRATED INSTRUCTION ON MEMORY FOR SCIENCE

CONTENT: *This conceptual framework describes how arts integration methods use research-based, memory-enhancing activities to potentially improve memory for non-arts content.*



- **Low performing students in the arts-integrated schools largely reached the achievement of their average and high performing peers;** a statistically significant difference in scores no longer existed. These findings suggest that applications of arts-based interventions may have a more **powerful impact on academic outcomes for students from low-performing groups** than students from proficient and advanced groups.

- Using scores from the annual state assessment to determine reading performance, data showed that **students scoring at the basic level benefited the most from art-integrated instruction** compared to peers performing at the proficient and advanced reading levels.

- **Basic readers remembered significantly more science content learned through the arts** at the delayed post-test than basic readers who learned science through conventional methods.



- **Using arts-integration instruction to teach science content was as effective or better than conventional science instruction** in increasing long-term memory for students' science content knowledge.

EDUCATION TRENDS: PREPARING EDUCATORS AND SCHOOL LEADERS FOR EFFECTIVE ARTS INTEGRATION



Integrating arts education—has been **proven beneficial in improving student learning and developing thinking skills and capacities, as well as supporting the civic skills necessary to contribute as a member of a diverse community.**

- Research shows that bringing the arts into the instruction of other classroom subjects benefits students' academic, cognitive, and personal outcomes.

- Studies show that arts integration has a positive effect on student academic achievement and on personal outcomes and engagement.

- **The evaluations found positive impact of arts integration on students' cognitive skills, engagements and attitudes about learning—especially for low-performing students, diverse learners and students with special needs.**



- Incorporating the arts into the curriculum substantially **increased teacher engagement and satisfaction.**

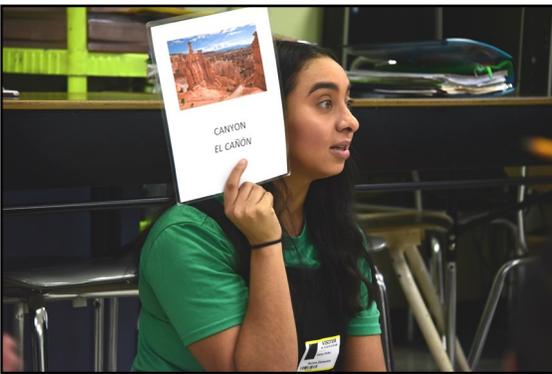


ALLEY STAGING STEM



Staging STEM Data 2018-19 Wrap-Up

- On average, a Staging STEM residency improves a classroom's understanding of a TEK by **33%** in a two-week period.
- When looking specifically at the bilingual classes that have participated in our program, we have seen an average increase in understanding of **39%**.
- Understanding for K-2nd grade classrooms increased by an average of **29%** during our two-week program.
- Understanding for 3rd-5th grade classrooms (testing grades) increased by an average of **34%** during our two-week program.
- Staging STEM residencies held in an AIN PD teacher's classroom saw an average increase of: **39%**
- By the end of 18-19, Staging STEM will have carried out 5 residencies in schools that were rated IR (improvement required) in student achievement. So far, we have completed 3 out of 5 residencies and have seen an average increase in understanding of **59%** during our two-week program.



By District:

Fort Bend ISD average increase: **29%**

Spring ISD average increase: **24%**

Houston ISD average increase: **41%**

Aldine ISD increase (1 residency – 8th grade): **59%**



Watching these Teaching Artists work with the kids made me rethink how I should be doing my lesson plans. The students were highly engaged and learned a lot about phases of the moon. —Sandra McMillan, 2nd grade teacher, Hirsch Elementary