



ALL for Science™

Authentic Literacy and Language for Science



INTRO:

To support young students' development of science-specific disciplinary literacies—tools, skills, and techniques applied to create and interpret text—and help them to connect the work of scientists with their own identities, we created a framework to provide authentic experiences with literacy strategies in science.

METHODS:

Created and piloted ALL for Science units in Houston-area classrooms:

- 20 1st-grade classrooms, 26 2nd-grade classrooms, 12 3rd-grade classrooms.



RESULTS:

- Statistically significant increases from pretest to posttest on student science knowledge.
- Enhanced skills related to science content and science disciplinary literacies (based on student assessments, products, and teacher reports).
- High ratings by teachers for ease of use and perceptions of student learning.

Outcomes from Student Pre - and Post Assessments for Each of Three Units									
Grade	# of items	α	Pre		Post		Cohen's d	t	p
			M	SD	M	SD			
First (N=309)	11	0.71	4.92	2.26	7.06	2.46	0.81	14.307	<0.001
Second (N=512)	17	0.70	7.14	3.23	11.10	3.70	1.09	24.686	<0.001
Third (N=236)	19	0.69	6.86	3.10	12.03	3.98	1.26	19.347	<0.001

NEXT STEPS:

Four new units for grades 4 and 5; longitudinal implementation in two schools.

Moreno, N., Sailors, M., Newell, A., Garay, L., Marek, M., Aguirre, S., Kelleher, T., Moore, M., & Thomas, J. National Institute of General Medical Sciences, NIH, SEPA Grant number R25 GM142019

Innovative Curriculum Framework that Enables Teachers to:

- Strengthen Students' Science-Specific Disciplinary Literacies (Grades 1-3) and
- Build a Classroom Science Community of Practice

