

Collaborative Summer Model : Teaching Elementary ELLs to Read Like Scientists

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MATSOL
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Who I Am

- Classroom Teacher
- Literacy Specialist
- Professor

DESE “Selected Populations” Data Salem, Oct 2011

Title	% of School	% of District	% of State
First Language not English	37%	24.9	16.7
Limited English Proficient	28%	11.3	7.3
Low-income	76%	57.7	35.2
Special Education	20%	23.1	17.0

What We Know About Literacy

1. Children need to read, write, and speak about something interesting (Allington, 2002; Guthrie et al., 1999).
2. Teachers must teach to students’ needs (McGill-Franzen et al., 2006).
3. Children at academic risk need individual attention from expert teachers in small settings (Gerber et al., 2001).

What We Know About Scientists (and Teaching Science)

“...from student experience is the central strategy for teaching science” (NSTA, 2005).

What We Know About Reading and Writing Like a Scientist

- Create knowledge through experimentation. Search for information and truth.
- Evaluate evidence.
- Dispel naïve ideas.
- Read to understand what I thought I knew.
- Transform information from one form to another.
- Read prose = visualization
(Heller & Greenleaf, 2007; Shanahan & Shanahan, 2008)

Summer Program Setting

- Staff
 - Director and Assistant Director
 - 11 teachers, 2 paraprofessionals, 1 SSU graduate-student volunteer
- Target students—49 struggling readers and writers entering 1st - 5th grade
- 5 classrooms
- Team taught
- Four weeks long, four days a week, four hours a day

Purpose

Provide intensive summer interventions in literacy for struggling readers and writers (predominantly ELL) through science and art.

Two Mantras

- Every child reads something well every day.
- Our curriculum is the child's needs.
 - We will focus on content, language, and use.

Planning our Water Content

2 Professional Development Sessions

- Developing science content, experiments, and field trips with Science Educator
- Brainstorming art extensions with Art Educator
- Informational text focus—how to scaffold learning
- Analyzing assessment data and determining next instructional steps

Daily Schedule


<ul style="list-style-type: none"> • Morning Meeting <ul style="list-style-type: none"> • Discussion • Daily agenda • Fluency work with poems • Content generation • Reading workshop <ul style="list-style-type: none"> • Guided reading • Word work • Independent reading • Read alouds about content 	<ul style="list-style-type: none"> • Writing Workshop <ul style="list-style-type: none"> • Writing about science experiments, field trips, videos, their research, and reading • Daily wrap-up <ul style="list-style-type: none"> • Goals for the next day • Content focus • Art extensions (field trips to SSU for 4th and 5th graders) • Daily debriefing and planning time for teachers
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Developing Science Literacy

- Reading and rereading multiple texts— independently, in pairs, rereading, with support, as read alouds
- What I thought I knew/ What I have learned as a scientist chart (Revised KWL charts)
- Researching their own questions—paired research
- Introducing and using the language of experiments (i.e., hypothesis, results, testing) and lab reports

Developing Science Literacy

- Developing experiments and excursions—using the language and vocabulary independently (i.e., creating lava lamps, studying the salt content of brackish water, saltwater, and freshwater)
- Keeping scientific journals—integrating writing
- Presenting knowledge to authentic audiences



Reading Outcomes

Number of Children	Growth on the BAS reading assessment
19 children (39%)	+3 months
14 children (29%)	+6 months
4 children (8%)	+9 months
3 children (6%)	+12 months
9 children (18%)	maintained

- 14 children (29%) who were previously below grade level are now on or above grade level
- An average of four months of growth in four weeks
- Attendance = 81%

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More Progress!

- 63% of the children increased their spelling ability
- 52% of the children increased in their content knowledge
- 45% increased their use of content vocabulary
- 30% increased their English Language Proficiency
- More than half of the children (52%) reported on evaluative surveys that they were now more motivated to read and participate in literacy activities.



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Our Budding Scientists

“As a scientist, I’ve learned to not touch the animals.”

“I’ve learned that hermit crabs go in their shells.”

“As a scientist, I’ve learned to read for details.”

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Principles for Improving Children’s Literacy Achievement (and particularly for science!)

1. All children learn best when the learning is situated in context (Goldschmidt, 2010; Guthrie et al., 1999), and this is particularly true for ELL students (Cummins, 2000).
2. Assessment should inform instruction (Valencia & Buly, 2002).

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More Principles

3. Children need more experience with “high success reading” (Allington, 2002, 2006).
4. Struggling readers need support reading grade-level text every day (Fielding & Roller, 1992, McCormack & Paratore, 2011).
5. Reading informational text complements writing-to-demonstrate learning (Duke, 2004).

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More Principles

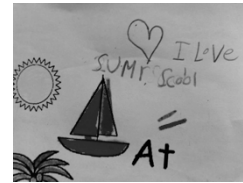
6. Low student-to-teacher ratio matters. The most struggling readers need the most specialized, expert instruction (Gerber et al., 2001).
7. Professional development, coaching, and collaboration build teachers’ capacity (Guskey, 2003).

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Implications and Application

We believe that programs such as this can be implemented during and outside of the school year. It will take:

- Collaboration between ESL teachers, content-area teachers, and district leaders for PD opportunities
- Understanding of motivational, content-rich, language-intensive materials
- Identification of students at risk
- The opportunity for hands-on learning
- More deliberate use of informational text
- The belief that all students can achieve at high levels



Questions and Comments

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Thanks for coming!

