Integrating Science into the Language Arts Curriculum in Elementary Classrooms

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Rationale:

Standardized testing pressures have led schools to decrease science instruction time. I believe that science is an integral part of education that needs more emphasis than it is currently given in elementary schools.

Research Question:

How can I effectively integrate science in the language arts curriculum?

Phase One: Guided Reading Group

Participants:

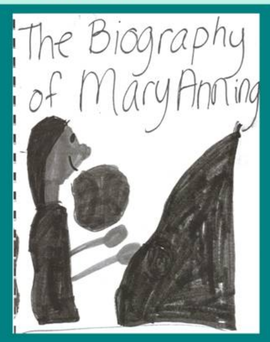
- Two girls and one boy, 8 years old
- All three participants were reading above grade level.

Methodology:

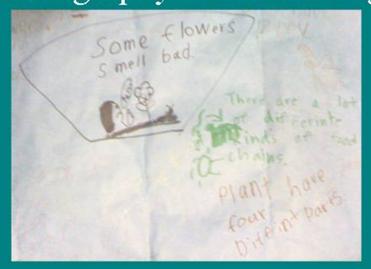
- 6 weeks- read science storybooks, informational books, and eye witness accounts.
- Used: KWL charts, vocabulary logs, and before and after charts.
- 4 weeks- researched a scientist, wrote a biography, published it, and read it to the class.

Findings:

- Able to read story books and locate the scientific content in them and create their own glossaries.
- The biography project seemed to be the most effective strategy of integrating science into the language arts. Students worked on reading, comprehension, organizing facts, writing, editing, and retelling a story.



Excerpt from biography written during Phase One



Section of "What We Learned" poster from Phase Two

Phase Two: Whole Class Instruction

Participants:

- 22 second grade students -12 girls and 10 boys
- None of the participants were labeled with learning disabilities. One had an IEP for a physical disability.

Methodology:

- Independent reading- students read books I gave them and wrote or drew what they learned on a poster.
- Students read or picture- read ocean books and shouted out a cool fact about what they learned to the class.
- Science instruction- I read and students wrote hiking guides, played comprehension games, and took notes.

Findings:

- "What We Learned" poster allowed for students to demonstrate their reading comprehension.
- Through exploring ocean books, students were engaged in scientific learning, reading, and retelling.
- Not as effective as Phase One

Most Effective Strategies

Effective Strategy	Phase	Student Choice	Why it was effective
Glossary	1	N	By making a glossary of unfamiliar words in science books we read, the students were able to work on their vocabulary and comprehension skills as well as increase their scientific knowledge.
Biography	1	Y	Allowing students to choose a scientist got the students more engaged in this activity. Students a lot of language arts skills including: comprehension, retelling, writing, and editing. Students also learned about the lives of scientists and their contributions to science
"What We Learned" Poster	2	N	Students wrote the facts they learned about plants on a poster that was then displayed in the classroom. This allowed for students to see plant facts that may not have been included in the books that they read which increased their scientific knowledge more than if they had only read their plant book.
Exploration Reading	2	Y	Students were allowed to choose which book they wanted to read about oceans. Allowing students to read a book of their choice and shout out cool facts they learned created a lot of student engagement.