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Each has been written by a teacher or teachers who are members of the Partnership. The first, which begins below, addresses the thinking and reading strategies students need to use in reading nonfiction. Heather and Aubrey teach at the middle school level, but the tools they have developed can be used across the grades, and they invite you to try them.

The second article, on page 3, shares an envisionment-building experience from a grade 3 math lesson. No matter what age and subject you teach, we encourage you to read MaryAnn’s article and think about how you might use a similar approach with your own students.

Kudos to the teacher authors who took the time to share their efforts and what they have learned with others. On behalf of all our readers and ourselves, Eija, Johanna, Karen, Kathy and I thank them and invite others to follow their lead.

Engaging with Nonfiction Texts

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JIA

Encouraging Students to Think While Reading Nonfiction

Heather Callagan
Aubrey Salisbury

We teach English (Heather) and social studies (Aubrey) as a 6th-grade team. Our students have become accustomed to using Reader’s Marks when reading fiction, and we have found that their use promotes active learning while reading and then rousing discussions in class. However, when we tried to use the marks for reading nonfiction, we found that they are not universal: students did not see a difference between reading a fiction and a nonfiction text. For example, making predictions is not as important in nonfiction texts as making connections or evaluating the author’s evidence.

Last year we realized that we needed to provide more support to help them learn how to think about a nonfiction text, so we decided to develop “thinking marks” to promote higher engagement with such texts. Since students had already mastered “regular” marks, devising a similar structure for nonfiction texts, we thought, would help them engage better with the material and provide a comforting level of security.

Drawing on Heather’s familiarity with fiction Reader’s Marks, we first discussed which of these marks were useful and identified what we thought was missing for reading nonfiction. We also reviewed suggestions from the professional literature. Our next step was to try it ourselves. Aubrey found a practice piece and we read the piece together, stopping along the way to note our thinking process. As we read, we discovered that three separate processes were occurring. Before we read, we thought about what the article was going to be about and we looked for the thesis before even beginning to read. Then during reading we engaged with the material, trying to understand the author’s thesis and comparing the evidence to our own knowledge.

(cont p. 2)
Nonfiction Reading

It was during reading that Reader’s Marks played a strong role. After reading, we reflected on the piece and thought about how the overall piece affected our opinion on the subject. This reading, coupled with our knowledge of teaching reading skills, helped us to develop a system for reading nonfiction using what we came to call Thinking Marks.

Developing the Tools

From this work we developed two tools, a set of “Strategies for Reading Nonfiction” (see box below) and a set of Thinking Marks (see p. 4). The Strategies help students focus on the essential questions they should be considering when approaching a nonfiction text to help them focus on the different thinking processes involved at each stage – before, during, and after reading. We designed the Thinking Marks to help students during reading -- questioning the text, making connections to previous knowledge, and working to understand the evidence the author is presenting. This type of thinking proves more valuable in content classes than focusing on themes and predictions, which are essential when reading fiction.

Because we teach as a team, we were able to present these strategies to the students together. During our first social studies unit on archeology, Heather read an article on archeologists in her English class and taught the Strategies and Thinking Marks in depth. She stressed that the use of the proposed symbols is not as important as the thinking, and some students found that writing their comments is easier than getting hung up on symbols.

Using a nonfiction article in English class also showed students that social studies and English use skills that are needed in both subjects. Aubrey reviewed the Strategies and Thinking Marks in social studies when introducing an article about the types of dating archeologists use to date artifacts. She also supported and stressed the thinking rather than the use of the symbols. The symbols act as a guide to help the students think about the text. Students remembered the strategies from English class and were able to employ them when reading the article. As the year continued, Aubrey continued to use the thinking marks extensively in social studies, while Heather used

<table>
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<th>Strategies for Reading Nonfiction</th>
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<td><strong>Before You Read</strong></td>
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<td>1. Set Your Purpose:</td>
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<tr>
<td>A. What do I want/need to know about this topic?</td>
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<td><strong>Strategy:</strong> Use your note sheets or questions to help you create a purpose.</td>
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<td>2. Preview the Selection</td>
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<tr>
<td>A. What is the author’s purpose in writing this piece?</td>
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<td>B. Predict the main point of the piece.</td>
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<td><strong>Strategy:</strong> Look at headings, graphics, pictures, captions, keywords.</td>
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<td><strong>While You Are Reading</strong></td>
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<td>1. Clarify Understanding:</td>
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<tr>
<td>A. Do I understand the text?</td>
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<tr>
<td><strong>Strategy:</strong> Use context clues, pictures, headings, and keywords to help you understand what the text is telling you.</td>
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<td>2. Engage in Deep Thinking</td>
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<td><strong>Strategy:</strong> Use your Thinking Marks to note the thoughts that occur to you as you read the text.</td>
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<td><strong>After You Have Read</strong></td>
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<tr>
<td>1. Evaluate the Text:</td>
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<tr>
<td>A. Is this information fact or opinion?</td>
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<tr>
<td>B. Is what the author is saying useful?</td>
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<tr>
<td><strong>Strategy:</strong> Use your Thinking Marks to identify evidence the author used to prove his or her purpose.</td>
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<td>2. Reflect on Your Task</td>
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<tr>
<td>A. Did I meet my purpose?</td>
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<tr>
<td>B. Can I accurately complete the task?</td>
</tr>
<tr>
<td>C. What new conclusions have I reached?</td>
</tr>
<tr>
<td><strong>Strategy:</strong> Use your Thinking Marks and new knowledge to accurately complete the task.</td>
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Envisionment-Building in Math: A Reflection on the Year

MaryAnn Murphy

Because specialized math vocabulary words are the building blocks of mathematics instruction, my co-teacher and I strive to offer activities that help our third-grade students develop an interest in words and relate them to their everyday life. We use “student-friendly explanations” as the springboard to launch instruction that takes students to higher levels of understanding. Ultimately, each student lands on sound footing, connecting and substituting everyday language for specific math terminology.

For example, to promote deep processing of a word’s meaning, one day last winter, we tried a carousel activity. In this, my first attempt at a carousel, we jumped in feet first! We set up four stations, each of which displayed a piece of chart paper with written directions:

- Explain using words, pictures, number sentences or mathematical symbols ___.

This day our words were: Addition, Commutative Property, Fewer, and Even, words that had been part of our daily instruction for many weeks. Now the students were going to apply their knowledge, take it to a deeper level of understanding, and provide written feedback to the teachers.

**Setting Up the Groups**

We divided students into cooperative learning groups and gave each group a colored marker. Each group went to a different station and selected a recorder for that first station. Directions were to “define the vocabulary word in ONE WAY.” Given 3-4 minutes for discussion, the group had to come to agreement and record their work on the poster. Then the groups rotated.

At the next station, students were required to define that station’s word in a way that was different from the previous group. The first recorder also passed the marker to another member of the group, so that everyone eventually was responsible for writing. (If there are more students per group than stations, two students at one station can share the marker and write together.) The groups rotated through all the stations in this way, each group defining each word in a different way.

**What Students Wrote**

At the **EVEN** station, the **orange group** wrote,

- $8 \times 4 = 32$…
- even x even = even.

The **green group**’s approach to defining “even” in a different way became,

When you start with one, one is odd. The pattern is odd, even, odd, even…

The **purple group** drew a picture of two rows of six apples illustrating one to one correspondence. And the **blue group** wrote,

- 2, 4, 6, 8, are all even numbers.

After carouseling through all the stations, the students gathered on the rug with their vocabulary charts to review their work. We looked through our charts, identified each group’s work by its color, and discussed what each explanation contained. If clarification was needed, we could add that information in a different color. For example, we extended the **blue group**’s definition of **EVEN** by adding after “2, 4, 6, 8, are all even numbers”

so any larger number with 2, 4, 6, 8, or 0 in the one’s place is even also and even numbers are multiples of two,

and we gave examples.

**Student Reflections on Their Work**

After reviewing the work from all four stations, we asked students to go to their math notebooks and write about what they had learned with the following prompts:

- I understand this about ________ now.
- Today I learned . . .
- The commutative property is . . .
- Something I know now that I didn’t understand before is . . .

Despite the snow raging outside and constant interruptions from related announcements, this activity proved to be a great success! All our students were engaged the entire time; we had to remind them that the day was ending and they needed to get their coats!

As we continued to use this activity in winter and spring, excitement grew. Students continued to explore being independent in their cooperative groups, and participation remained high, with reluctant learners easily pulled into the discussions. Everyone worked on their own level but came to the activity with the expectation that they would participate and would contribute what they know. I can only see this activity getting better and better as we refine it and students become more familiar with the format, confident of their work, and gain experience in the world of mathematics.

Mathematics offers endless opportunities to use activities such as the carousel to increase student participation, meaningful dialogue, and ultimately learning! Everyone participates, everyone learns, and students support each other. It is not a competition, but rather a collaborative enterprise to get their minds around important concepts in mathematics. This is vocabulary development our students will hold on to!

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**Nonfiction Reading**

(cont’d from p. 3)

them in English when opportunity provided.

**Results**

In both subjects, the Strategies and Thinking Marks evoked student understanding and thinking when presented with nonfiction texts. Students developed a strong understanding of how to approach, read, and understand a nonfiction text. They could easily see the differences between Thinking Marks and the Reader’s Marks for fictional texts and the differences in the kinds of thinking that needs to occur when reading the different kinds of texts. Our goal was met. Students were critically thinking about nonfiction text and improving their understanding of the texts they were presented with.

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The Partnership for Literacy (P4L) is a promise and plan for action for continuous teacher learning. It is a collaborative model for schools and districts that want to become (or become stronger) learning organizations with more engaged students demonstrating higher thinking and literacy achievement. Experience shows that such changes happen more effectively when someone from outside the district or school fosters discussion and works toward systematic change. Engaging teachers together in the intellectual work of reflecting on and analyzing current practice, raising questions for themselves and colleagues, and negotiating collective goals is key to bringing about the desired outcomes.

The Partnership is based on the Center on English Learning & Achievement (CELA) and others’ long history of research and development into effective teaching, learning, and professional development. For information about CELA, the Partnership, or this newsletter, contact Janet Angelis, CELA Associate Director and newsletter editor: 518-442-5023, or jangelis@uamail.albany.edu.

During several weeks in October, the Partnership for Literacy and CELA have benefitted from the presence and scholarship of Mary Ingemansson from Kristianstad University in Sweden. Mary has shared with us some of her research on using historical fiction to teach history. We hope to bring you some of what she has learned in a future issue of The Partnership Community.

Heather Callagan and Aubrey Salisbury teach English and social studies, respectively, at Iroquois Middle School in Niskayuna. They have been working with Partnership facilitator Eija Rougle.

MaryAnn Murphy is a math specialist who pushes into classes at the Hudson Intermediate School. Her coteacher is Tiffany Shumway, and they have been working with Partnership facilitator Johanna Shogan.

Janet Angelis is associate director of CELA and the Partnership for Literacy.

Please see Nonfiction Reading article, pp. 1-3.