The focus of this newsletter is to examine ways to close the large achievement gap by providing learning strategies for teachers and students in core academic subjects.

"Why can’t my students read and write by now? Why am I hearing that I still need to teach reading? How can I fit teaching reading into an already full curriculum?"

Many middle and high school teachers ask similar questions on a regular basis.

Content teachers do not have to be reading teachers. However, in order to maximize learning of specialized subject matter, content teachers can address literacy needs to assist struggling readers’ mastery of the curriculum.

What is Content Literacy?

Content Area Literacy can be defined as the level of reading and writing skill necessary to read, comprehend, and react to appropriate instructional materials in a given subject area.

A visitor to a literate math class will hear students discussing math with their teacher and peers using the precise language of mathematics to describe and explain math concepts. They will see a print rich classroom where math vocabulary is displayed on word walls, and math literature is readily available to spark student interest in the richness of mathematics.

In the literate math classroom, students are being taught to understand how their math book can be a great resource in helping them master math content, and they are engaged in lessons that help them tap into all those years of previous math instruction that form the foundation for higher levels of math knowledge.

Math teachers, who are infusing these kinds of literacy practices into their lessons, are producing learners who are truly math literate.
## Collaborative Strategic Reading Learning Log

<table>
<thead>
<tr>
<th>Name: ____________________________________________</th>
<th>Date: ________________________________</th>
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<tbody>
<tr>
<td><strong>Brainstorm:</strong> What do you already know about this topic?</td>
<td><strong>Predict:</strong> What do you think you will learn by reading this passage?</td>
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<td><strong>Clunks:</strong> Please list your Clunks.</td>
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<td><strong>The Gist (main idea):</strong> Write the Gist of the section you read.</td>
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<td><strong>Make questions:</strong> Make questions about the main ideas.</td>
<td><strong>Review:</strong> Write something important you’ve learned.</td>
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### Clarifying Routine- DEFINES

The Clarifying Routine focuses on helping students identify, explore, and organize information that supports the comprehension of factual information.

- Designate the term
- Explore the clarifiers
- Figure out the core idea
- Identify knowledge connections
- Note its usage or concept
- Explain what it’s not
- Set up an example sentence

### The Word Identification Strategy- DISSECT

- Discover the context
- Isolate the beginning
- Separate the ending
- Say the stem
- Examine the stem
- Check with someone
- Try the dictionary
Helping Students See the “Big Picture”
- Course Map
- Unit Organizer

Understanding Difficult Concepts
- Compare and Contrast
- Concept Diagram

Remembering & Recalling Important Information
- Interactive Study Guides
- FRAME Routine

ACQUISITION
- DISSECT - Word Identification Strategy
- Visual Imagery
- Reciprocal Instruction
- QAR-Question / Answer Relationship
- The Clarifying Routine
- CSR-Collaborative Strategic Reading
- Skim and Scan

STORAGE
- Use of mnemonics
- LINCS Vocabulary
- Note-taking
- Graphic Mapping

EXPRESSION OF COMPETENCE
- Reading Response Journals
- Test Taking Strategies
- Paraphrasing / Summarizing
Surviving Solo
These lessons provide students the opportunity to explore and realistically assess the affordability of moving out on their own and then develop an individualized action plan for achieving this goal. Specific topics include

- Cost and feasibility of obtaining the "American Dream."
- Housing alternatives.
- Costs of establishing a first residence.
- Benefits of budgeting.
- Major categories of living expenses.
- Deciphering rental and leasing agreements.
- Landlord and tenant rights and responsibilities.
- Surviving and thriving with roommates.
**False Assumptions of Content Teachers**

1. Students have learned to read in elementary schools.
2. Students have sufficient prior knowledge to cope effectively with the important information in content textbooks.
3. The processes involved in reading and comprehending efficiently in content textbooks are identical to those utilized in reading from basal readers in elementary school.
4. Content reading means teaching phonics and other skills not directly related to their subject areas.
5. Teachers are information dispensers.

**Recommended Practices for Teaching in Content Areas**

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<tr>
<td>1. The teacher utilizes all language processes to enhance students’ learning with text.</td>
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<tr>
<td>2. The reading level of all students is known by the teacher</td>
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<td>3. Lessons capitalize on students’ cultural background.</td>
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<td>4. The teacher has evaluated the text for the presence or absence of characteristics which make a well-organized text.</td>
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<td>5. Materials for instruction are chosen to match the reading level of the students.</td>
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<td>6. Book and other materials are available for students who read below the readability of the text.</td>
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<td>7. Textbook aids, such as illustrations, maps, and graphs, are explained or called to the attention of students.</td>
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<td>8. Class time is spent discussing how to read the text effectively.</td>
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<td>9. Prior knowledge of the text concepts is activated before reading the text.</td>
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<td>10. Purpose is provided for each reading assignment.</td>
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<td>11. The teacher provides some form of a study guide, listening guide, or outline to aid in comprehension.</td>
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<td>12. The teacher asks questions designed to promote thinking at all levels of comprehension.</td>
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<td>13. Small group instruction is used where appropriate.</td>
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So, how do you teach content literacy in mathematics and science?
Start by considering these questions:

* What prior knowledge must students have?
* How do students obtain new knowledge - lecture, reading, etc?
* How do they apply their new knowledge?
* What types of text will students read?
* Which reading habits/skills are required?
* Which writing habits/skills are required?
* What types of speaking/presenting skills are needed?

Read your math book! Read your math book? We don’t often consider the amount of reading necessary in Mathematics.

Yet regularly students must read texts to gain an understanding of mathematical concepts. This often requires students to make sense of diagrams, numeric equations and visual representations of numbers in addition to the text that accompany these.

Students must explain concepts, define vocabulary, demonstrate understanding using numbers and provide examples and non-examples of concepts.
The facts about secondary literacy are startling:

• Approximately two-thirds of eighth- and twelfth-grade students read at less than the “proficient” level as described by NAEP (National Institute for Literacy, 2006).
• Approximately 32 percent of high school graduates are not ready for college-level English composition courses (ACT, 2005).
• Over half of adults scoring at the lowest literacy levels are drop-outs and almost a quarter are high school graduates (NCES, 2005).
• Approximately 40 percent of high school graduates lack the literacy skills employers seek (Achieve, Inc., 2005).
• U.S. drop-outs’ literacy skills are lower than most industrialized nations, performing comparably only to Chile, Poland, Portugal and Slovenia (OECD, 2000).

MANY MIDDLE AND HIGH SCHOOL STUDENTS REQUIRE DIFFERENTIATED INSTRUCTION—THAT IS, INSTRUCTION TARGETED TO THEIR INDIVIDUAL STRENGTHS AND WEAKNESSES (ALLIANCE FOR EXCELLENT EDUCATION FOR THE CARNEGIE CORPORATION OF NEW YORK).

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**The Increasing Specialization of Literacy Development**

- **Basic Literacy**: Literacy skills such as decoding and knowledge of high-frequency words that underlie virtually all reading tasks.
- **Intermediate Literacy**: Literacy skills common to many tasks, including generic comprehension strategies, common word meanings, and basic fluency.
- **Disciplinary Literacy**: Literacy skills specialized to history, science, mathematics, literature, or other subject matter.
SQ3R-Survey, Question, Read, Recite and Review

1. **Survey**
   - Think about the title: “What do I know?” “What do I want to know?”
   - Glance over headings and first sentences in paragraphs.
   - Look at illustrations and graphic aids.
   - Read the first paragraph.
   - Read the last paragraph or summary.

2. **Question**
   - Turn the title into a question.
   - Write down any questions that come to mind during the survey.
   - Turn headings into questions.
   - Turn subheadings, illustrations, and graphic aids into questions.
   - Write down unfamiliar vocabulary words and determine their meaning.

3. **Read Actively**
   - Read to search for answers to questions.
   - Respond to questions and use context clues for unfamiliar words.
   - React to unclear passages, confusing terms, and questionable statements by generating additional questions.

4. **Recite**
   - Look away from the answers and the book to recall what was read.
   - Recite answers to questions aloud or in writing.
   - Reread text for unanswered questions.

5. **Review**
   - Answer the major purpose question.
   - Look over answers and all parts of the chapter to organize information.
   - Summarize the information learned by drawing flow charts, writing a summary, participating in a group discussion, or by studying for a test.
Proficient vs Struggling Reader

A reader who holds a Ph.D. in history may find a manual on building a car engine to be a "difficult text."

However, one can assume that a Ph.D. is a viable reader who will apply internalized reading strategies repetitively in order to attain comprehension.

Such a reader rereads, paraphrases, considers context, infers, questions, reflects, and perhaps even consults other materials without conscious decision.

The application of reading skills to a difficult text is automatic for a proficient reader.

A struggling reader, on the other hand, either holds no intrinsic repertoire of reading strategies, or applies such strategies only to texts with which he is comfortable. Thus, simple reading strategies built into a content lesson can provide a struggling reader with the scaffolding necessary to meet success.

Incorporating learning aids such as graphic organizers and reading anticipation guides into reading assignments can also help students visually organize content.
50 Interesting Ways to use Wordle in the Classroom
https://docs.google.com/present/view?id=dhn2vcv5_157dpbsg9c5

Create your own Word Clouds
www.wordle.net

Center on Instruction, Your Source for Information on Research Based Instruction
http://www.centerforinstruction.org/index.cfm
Research and information on K12 instruction in reading, math, science, special education, and English language learning.

Intervention Central
http://www.interventioncentral.org/index.php#ideas
Behavioral intervention strategies, download publications on effective teaching practices, and tools that streamline classroom assessment and intervention.

WEBLIOGRAPHY

BIBLIOGRAPHY


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Cynthia Shanahan is a professor in the Department of Curriculum and Instruction at the College of Education, University of Illinois at Chicago, and executive director of the college’s Council on Teacher Education. Her primary research focus is adolescent literacy, especially within content areas. As the principal investigator in a National Reading Research Center study, Shanahan examined the use of texts in learning science and history, culminating in her book, Learning from Text across Conceptual Domains (1998). She has taught literacy to underprepared college students for more than twenty years.