Power Tools for CLASS:
Content Literacy Assessments, Standards & Strategies

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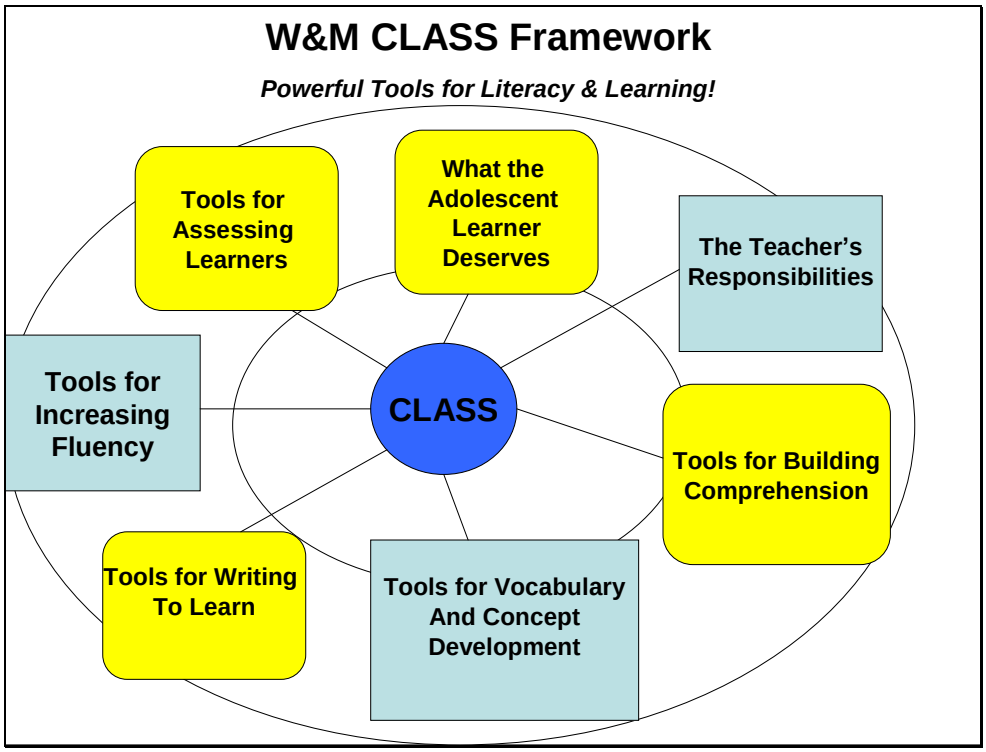
Welcome to W&M CLASS of 2007!

ARE YOU WONDERING just what it is you will have to do for CLASS II?

- **Actively participate** in all CLASS II Academy sessions.
- **Refine and improve five (5) lessons** in a unit you regularly teach, using strategies you learned at CLASS. Lessons are expected to be complete, edited and in a form appropriate to be shared with other middle school teachers. They are to be submitted in electronic form using the Lesson Plan Template provided on the flashdrive.
- **Work collaboratively** with team members to select common strategies that everyone on your team will use in at least one of their five (5) lessons. Collaboratively reflect on examples of student work relating the quality observed to the strategies used in the lesson.
- **Plan and deliver a conference presentation** with team members at the Middle School Dissemination Conference (March 6 or 13, 2007). This presentation will be based on lessons developed by your team and address changes in your teaching and the learning of your students.
- **Share at least one CLASS strategy or tool with a teacher at your school**, your grade level, or school faculty during a faculty meeting or professional development time.
- **Administer pre and post reading assessments** to your students (Gay Ivey's tools).

Calendar for CLASS II Academy

DATE	TIME	ACTIVITY	LOCATION
August 8, 2006	8:30-3:30	Academy Day One	Gray Wolf Lodge
August 9, 2006	8:30-3:30	Academy Day Two	Gray Wolf Lodge
August 10, 2006	8:30-3:30	Academy Day Three	Gray Wolf Lodge
August, 2005		Project Workday	Determined by team, team submits report
Fall - TBD		School Visit by W&M CLASS Staff	In your school
October 3, 2006		Academy Day Four: Assessment and Framing Routine	TBD
November 14, 2006	8:30-3:30	Academy Day Five	TBD
Winter - TBD		School Visit W&M CLASS Staff	In your school
February 11, 2006		Project Workday	Determined by team, team submits report
March 13, 2007	8:30-3:30	Middle Dissemination Conference	TBD
March 27, 2007	8:30-3:30	Academy Culminating Day	TBD


W&M CLASS Framework
Powerful Tools for Literacy & Learning!
Tools for Assessing Learners
What the Adolescent Learner Deserves
The Teacher's Responsibilities
Tools for Increasing Fluency
CLASS
Tools for Building Comprehension
Tools for Writing To Learn
Tools for Vocabulary And Concept Development

Chapter 1

The Teacher's Role

SURVEY OF CLASS KNOWLEDGE

Preview literacy and learning tools included in this course and assess your knowledge of the tools listed in the left column. Mark an "x" to indicate your level of knowledge.

Literacy & Learning Tool	Clueless	Heard of it	Know it	Could teach it
Literacy Assessments				
Reading Fluency				
Assessment				
Instruction				
Comprehension Strategies				
Ask questions				
Infer				
Make connections				
Visualize				
Repair comprehension				
Determine importance				
Synthesize				
Vocabulary Development				
Marzano's 6 Steps				
Frayer Model				
Concept Sorts				
Writing to Learn				
Journals and Learning Logs				
Quick Writes				
Six Cognitive Level Reflections				
Making Thinking Public				
Think Aloud				
Marginalia				
Interactive Notebooks				
Interactive Data Walls				
Organize for Discussion				
Think/write/pair/share				
Jigsaw				
Walkabout				
Carousel brainstorming				
Huddle rotation				
Numbered heads				
Tear and share				

LET YOUR FINGERS DO THE WALKING…

Browse for 3 minutes…

What Is It?

Let Your Fingers Do the Walking is a simple protocol that allows learners to quickly preview learning material.

Why Use It?

Let Your Fingers Do the Walking helps to introduce the topic, builds interest in learning the new material and assists the learner in seeing the "big picture" of the whole text.

How Do I Use It?

Say to participants or students:

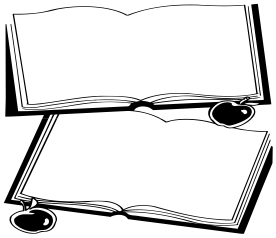
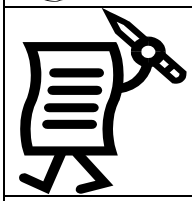
- Look through your materials. Scan the pages looking at titles, headings, graphics and other features.
- Flag pages that spark your interest. On sticky notes, jot down page numbers that you find to be interesting – or that have ideas you'd like to learn about, talk about, and experience.
- Browse for 3 minutes and be ready to share your topics of interest.
- Ask four to eight students to share their topics.

After the previewing time:

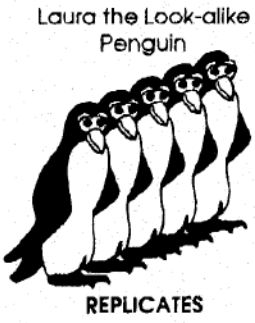
- Identify a "materials person" for each group to collect the sticky notes from each group's pile and place them on the DATA WALL on the chart labeled, "We are interested in…"
- Encourage students to check out what the class is most interested in learning. See how many responses are the same and how many are different.
- See Chapter 7 on Assessment for a description of Data Walls.

LEARNER EXPECTATIONS & ROUTINES

Articulate clear and explicit expectations to learners so they will know what you expect of them and how they can contribute to doing well in the class. Here are our expectations of teacher participants in our workshops. Adapt these for adolescent learners.

	★ We start and end on **time**. If you are not here, we will start without you and hold you accountable for what you missed. ★ Every minute counts and we will try to make the most of our time by actively engaging you in the content.
	★ The brain cannot endure any more than the derrière can stand to sit. ★ We will provide periodic **breaks** where you will have opportunities to stretch, stand, and move while working.
	★ This is a literacy course/workshop so expect to engage in **reading** and talk to others about what you learned. ★ Learners will write and talk about what they read with others. ★ All classrooms must require/allow time for reading.
	★ **Writing** is one element of literacy and learners will use writing to learn strategies throughout the course ★ Learners will reflect frequently and record their reflections in journal writing and quickwrites.
	★ We expect all learners will learn at high levels and we will use different approaches to enable this. ★ Our goal is for all participants to leave as **scholars** of content literacy strategies.
	★ We expect you to collaborate with and learn from others. We expect you to choose **learning partners**. ★ The learning goal partner will support your meeting your goals. The strategy and subject partners will help you to apply strategies to your content lessons.
	★ We expect participants to **transfer** what they learn in this course/workshop to their classroom practice. ★ We expect teachers to integrate newly-learned strategies into existing lesson plans.
	★ **Signals**: We will establish classroom routines: For example, when we move from small group to whole class.

Learner Disposition for Transfer: Which Style are YOU?

Learner Disposition for Transfer	Teacher and Student Descriptions
	**Teacher Training Transfer:** • Does nothing: This teacher is unaware of relevance and misses appropriate applications; overlooks intentionally or unintentionally. • Great session, but this won't work with my kids or content." "Or I chose not to use… because…" **Student Classroom Transfer:** • Misses appropriate opportunity: overlooks; persists in former way. • "I get it on the dittos but forget to make connections when I read a book."
	**Teacher Training Transfer:** • Drills and practices exactly as presented: Drill. Drill: Then stops; uses as an activity rather than as a strategy; • Duplicates. • "Could I have a copy of that transparency?" • No clear understanding of what he/she is doing. **Student Classroom Transfer:** • Performs the drill exactly as practiced, duplicates: "Mine is not to question why, so why ask questions during reading?"
	**Teacher Training Transfer:** • Tailors to kids and content, but applies in similar content; all look alike; does not transfer into new situations: • Replicates. • "I use the web for every character analysis." • Superficial understanding. **Student Classroom Transfer:** • Tailors but all look alike, replicates: Asking questions means I must make up three for each page.

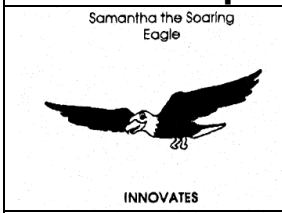
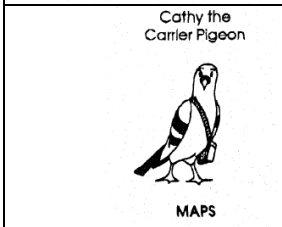
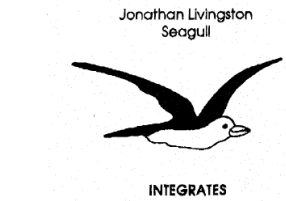
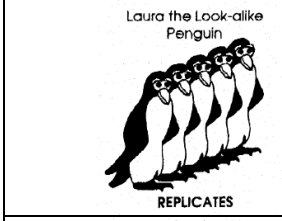
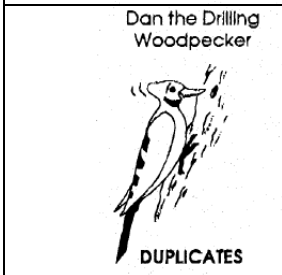
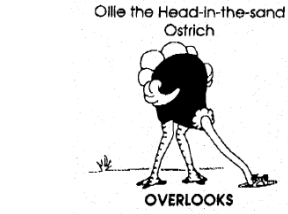
Learner Disposition for Transfer

Learner Disposition for Transfer	Description
	**Teacher Training Transfer:** • Has acute awareness and deliberate refinement; integrates subtly with existing repertoire. • Combines and synthesizes. • "I haven't used your ideas, but I'm wording my questions carefully. I've always done this, but more now." **Student Classroom Transfer:** • Connects to prior knowledge. • Combines with other ideas and texts, has awareness: "I always try to predict what will happen next."
	**Teacher Training Transfer:** • Consciously transfers ideas to various situations, contents; carries strategy as part of available repertoire. Synthesizes and maps. • "I use the webbing in everything I do." **Student Classroom Transfer:** • Carries strategy to other content and situations. Associates, maps. • "Let's brainstorm our vacation ideas and rank them to help us decide."
	**Teacher Training Transfer:** • Innovates, diverges, takes ideas into action beyond initial concept. • "You have changed my teaching; I can never go back to what I used to do. **Student Classroom Transfer:** • Innovates, takes ideas beyond initial conception, diverges, risks. • *"I've created another type of graphic organizer like the Frayer."*

Robin Fogarty, *Brain Compatible Classroom*, Second Edition, 2005.

What are your transfer goals?

Reflect and decide what level of transfer you will apply to all the strategies learned. Write the name of the strategies in the appropriate right column.

Transfer Disposition	I'm thinking about . . .
	Can I innovate using some element of this technique?
	How can I bridge or map this into several areas?
	How can I integrate this into a lesson I've planned?
	Is there an existing lesson where I can replicate this?
	Do I want to duplicate this?
	When might I overlook this strategy? Why?

Fogarty, Robin. *Brain Compatible Classrooms*, Corwin Press (2005).

COMMUNICATE LEARNING OBJECTIVES

Share the objectives of the class or course and ask students to write the objectives in their journal, binder, interactive notebook for the unit, or "Portfolio of Transformation."

Students must understand the learning objectives so that they can work with the teacher to achieve the desired level of performance. Both short-term and long-term goals need to be clearly visible to students and in language they can understand.

Some teachers post long-term objectives on the walls of the classroom so students can always see them (and the teacher can refer to them at the start of lessons). Other teachers give students goals for units of study or individual lessons in a handout; others set aside time for students to copy the objectives provided by the teacher.

Parents can be sent a letter to communicate the learning goals of a unit as well as the grading criteria. Hints for how to assist the child in reaching the goals can be most helpful for parents.

Record the Academy objectives below:

- ★
- ★
- ★
- ★
- ★
- ★
- ★
- ★

SETTING GOALS, OBJECTIVES AND PROVIDING FEEDBACK

WHAT IS GOAL SETTING?

- The process of ***establishing a direction for learning***.
- A skill that successful people have mastered to help them realize both short-term and long-term desires.

WHY SET GOALS?

Setting objectives and providing feedback engage the metacognitive thinking of students and help them to think about their own learning

WHAT RESEARCH SAYS: GOALS, OBJECTIVES & FEEDBACK

Instructional goals narrow what students focus on. Setting a goal focuses students' attention to such a degree that they ignore information not specifically related to the goal.

Instructional goals should not be too specific. Objectives should be as specific as possible but flexible enough to address diverse needs of students.

Objectives should say what a learner is expected to know and be able to do and may include a description of a product or result.

Students should be encouraged to personalize the teacher's goals.

Students can *contract* to attain specific goals. This gives them control over their learning.

Feedback should be "corrective" in nature; it should provide students with an explanation of what they are doing that is correct and what they are doing that is not correct.

Feedback should be timely. The more delay that occurs in giving feedback, the less improvement there is in achievement.

Feedback should be specific to a criterion, as opposed to norm-referenced.

Students can effectively provide some of their own feedback.

(Marzano, R., Pickering, D., & Pollock, J. (2001).

HOW DO I HELP STUDENTS SET GOALS?

Provide time for students to preview the course textbook, handouts, and other material and then invite students to set goals for themselves for the class. Make sure they understand why reaching these goals is good – that they will decide, personally, what they want to achieve and that only they can be responsible in the end. Check on students' progress toward reaching goals. Invite them to share their progress with others and to congratulate each other.

- ★ Have students write their goals down and share them with a neighbor for immediate feedback on how to refine them.
- ★ Ask students to sign up for a learning partner for the unit: students move to someone they have not worked with before and sign each other's learning goal handout.
- ★ Have students meet in groups to share their goals aloud and get affirmations and applause.
- ★ Ask groups to create team goals and whole-class goals. Post these in the classroom, and refer to them occasionally. Celebrate progress.
- ★ Group leaders could be used to check daily or weekly on each learner's progress towards goals. If group members need help with something, they tell the group leader. If a learner needs help refining or accomplishing a goal, he or she can ask for it then.

SOURCE: *Quick Hits: Successful Strategies by Award Winning Teachers* by Bender, Dunn, Kendall, Larson, Wilkes. Indiana University Press, Bloomington, IN.

CLASS Learning Goals and Partners

YOUR LEARNING GOALS: Write your goals based on CLASS objectives, handouts, as well as your interests and needs.

★

★

★

★

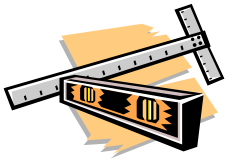
SIGN UP LEARNING PARTNERS: Find 3 partners and sign each other's form.

GOAL PARTNER_____

STRATEGY PARTNER_____

SUBJECT PARTNER_____

STRATEGIES: SETTING GOALS FOR LITERACY & LEARNING



K-W-L (Ogle, 1983)

What is KWL?
The K-W-L is a research-based tool to help students set goals for reading and learning, construct meaning, and helps to making connections between prior knowledge with new information. The 3-column chart captures the Before, During, and After stages of reading a text selection.

Why use KWL?
Students become involved in setting learning goals and their interest in the topic is heightened. KWL helps students think actively while reading.

How do I use KWL?
This activity can be done individually, but it is best done in pairs or groups. Before engaging in a simulation, reading a chapter, listening to a lecture, watching a film or presentation, or at the beginning of a unit of study, have students identify:

- **What I think I *know* about the topic (K)**
- **What I *want* to know about the topic (W)**
  …and, after the reading, listening, observing, or unit of study
- **What I have *learned* (L)**

K-W-L Worksheet

K – what I KNOW	W – what I WANT to know	L – what I LEARNED

"HOW TO DO WELL IN THIS CLASS: A CHECKLIST!"

Prepare a checklist for students so they will know what you expect of them and how they can contribute to doing well in the class. For example, here is one used by a physics teacher:

Class Expectations

Read and mark the questions or items that you need to improve on during this unit.

____**How much time do you invest in this class?** To get a ***B*** or better you will need to spend time IN class listening, taking notes, thinking, and OUT of class doing the homework and the readings and projects.

____**Do you prepare for class?** Stay current. If you are studying Chapter 4 and we are working on Chapter 6, you are going to be behind and you will most likely stay behind!

____**When and how do you study?** It is best to review right away. Break up your study times into short periods. Don't study when you are tired. Study in a quiet, private spot. Study by DOING. That means working the problems and answering the questions. When you get an answer right, go back over it to see why the method you used worked.

____**Can you explain it to others?** If possible, work problems in a group or with a partner. Explain your answers. If you can explain it to others, you KNOW it!

____**Do you cram for tests?** Don't. It will not work. DO not change your study habits because a test is coming. The most useable knowledge is already there – if you have kept up. Cramming leads to fatigue, test anxiety, and stupid mistakes.

Name _____ Date_____

My Learning Goals

Help students construct SMART personal learning goals by encouraging them to be specific and make their goals measurable. It is helpful to give them sentence stems to be completed.

Are your goals SMART?
SMART goals are specific and strategic, measurable, achievable, results-driven, and time-bound. Here's an example of a teacher's instructional goal for our course:
I will refine a unit of five (5) lessons to integrate the seven comprehension strategies, six steps for effective vocabulary instruction, and three writing to learn strategies by the middle of the marking period (October 3).

Rubric	Teacher and Student Example
Specific and strategic?	**Teacher example** specifies the what, how and why of the goal: The teacher's goal specifies that comprehension, vocabulary and writing strategies will be included in the lesson plans. **Student example**: *Read pages 30-45 in the history text, write questions in the margin of text, and practice answering those questions after reading.*
Measurable?	**Teacher example:** the sample goal above specifies the number of type and number of strategies to be included. **Student example**: I want to be a good reader is **not** a SMART goal: *Read Chapter 5 and then write a summary from memory. The summary would indicate that you did read the chapter and would allow you to evaluate your degree of understanding.*
Achievable?	***Teacher example****:* The goal is achievable because you have all the resources needed including team and faculty support. ***Student example****: Your goal should be set by you rather than by someone else. You know best your strengths and weaknesses, and can use this information to maximize your chances of success.*
Results-driven?	***Teacher example****:* The goal focuses on outcomes, not how the goal will be achieved. ***Student example****: I will make a minimum grade of 90 on the assignments.*
Time-bound?	**Teacher example**: October 3 specifies the deadline. **Student example**: Sets the deadline: *I will complete all reading selections and the written report by Friday.*

Rewrite one of your learning goals into a SMART goal:

_____
_____
_____

Contracts and Course Agreements

At the beginning of the semester, ask students to read and agree to a CONTRACT for what they will do to be **successful learners.**

***Please place your initials next to each item and your signature at the end*.**

___1. I acknowledge that I have read and understand the requirements and assignment dates of this class. I am responsible for keeping up to date and will not use "I forgot" or "I didn't know it was due today" as an excuse.

___2. I am responsible for asking questions when I do not understand the content presented. I will not use, "I didn't understand or know" as an excuse for not completing and assignment on time. It is my responsibility to bring to the teacher any questions, comments, and reactions to this course that affect my ability to learn.

___3. I understand that this class will use active learning and cooperative learning teaching techniques. This will require participation and involvement on my part.

___4. I am responsible for knowing assignment dates and deadlines and for meeting these. I understand that late work will receive less credit.

___5. I acknowledge that the teacher is not responsible for decisions I make about how I spend my time, such as extra curricular activities, jobs, social life, or waiting until the last minute to complete assignments. My life is my responsibility.

Signature_____

Parent signature_____

Date_____

Adapted from Teaching with Style by Anthony Grasha.

THE HOUSE

The two boys ran until they came to the driveway. “See, I told you today was good for skipping school,” said Mark. “Mom is never home on Thursday,” he added. Tall hedges hid the house from the road so the pair strolled across the finely landscaped yard. “I never knew your place was so big,” said Pete. “Yeah, but it’s nicer now than it used to be since Dad had the new stone siding put on and added a fireplace.”

There were front and back doors and a side door which led to the garage which was empty except for three parked 10-speed bikes. They went to the side door, Mark explaining that it was always open in case his younger sister got home earlier than their mother.

Pete wanted to see the house so Mark started with the living room. It, like the rest of the downstairs, was newly painted. Mark turned on the stereo, the noise of which worried Pete. “Don’t worry, the nearest house is a quarter mile away,” Mark shouted. Pete felt more comfortable observing that no houses could be seen in any direction beyond the huge yard.

The dining room, with all the china, silver, and cut glass, was no place to play so the boys moved into the kitchen where they made sandwiches. Mark said they wouldn’t go to the basement because it had been damp and musty since the new plumbing had been installed.

“This is where Dad keeps his famous paintings and his coin collection,” Mark said as they peered into the den. Mark bragged that he could get spending money whenever he needed it since he’d discovered that his Dad kept a lot in the desk drawer.

There were three upstairs bedrooms. Mark showed Pete his mother’s closet which was filled with furs and the locked box which held her jewels. His sisters’ room was uninteresting except for the color TV which Mark carried to his room. Mark bragged that the bathroom in the hall was his since one had been added to his sisters’ room for their use. The big highlight in his room, though, was a leak in the ceiling where the old roof had finally rotted.

Excerpt from: Pitchert, J.W. and R.C. Anderson, 1977. “Taking different perspectives on story.” *Journal of Educational Psychology* 69, 309-315.

SETTING A PURPOSE FOR READING

1. Read “The House” and use a pen or pencil to circle whatever you think is important.
2. Read the piece again and this time use a yellow highlighter to mark places in the text a robber would find important.
3. Read the story a third time and mark with a different color highlighter specific places in the story that a prospective home buyer might think are important.
4. Contrast the three times you read and marked text. What was easier? Harder? Why?
5. On a piece of paper, make a list of what the robber would find important. Make a list of what the prospective home buyer would find important. Compare the two lists and discuss why each item is important. If an item is on both lists, tell why both a robber and a prospective home buyer would find it important.

Notes:

TEACHER IMPACT
INTERACTIVE NOTE TAKING

This is a model of the interactive note tool, including text from the book, *Instructional Strategies That Work*. This tool scaffolds the process of note taking for students as it minimizes the note taking to essential information. The teacher gives the lecture, supports student note taking with enlarged text on transparency sheet and/or with the material duplicated for students to write notes.

1. The _____ has more impact on _____ than school factors.
2. The most important factor that affects student learning is the _____.
3. In any given school, there is wide _____in the _____ among teachers.
4. The most powerful way to improve _____ is to improve the _____of the _____.
5. Effective teachers appear to be effective with _____of all _____ levels, regardless of the _____ of heterogeneity in their classes.
6. If the _____ is ineffective, _____under that teacher's tutelage will achieve _____ progress.
7. It is perhaps self-evident that more effective teachers use more effective _____. It is probably also true that effective teachers have _____ _____ at their disposal.

(Marzano, R., Pickering, D., & Pollock, J. (2001).

COOPERATIVE LEARNING ACTIVITIES

(D.& R. Johnson, Spencer Kagan)

The following strategies are useful for instruction involving pairs, dyads, triads, and small groups.

TTYN – (Turn to Your Neighbor) (3-5 minutes)

Ask the students to turn to a neighbor and ask him/her something about the lesson:

- To explain how to do what you have just taught
- To summarize the 3 most important points of the lesson/discussion
- To discuss a key point
- To answer a question you pose

Learning Partners (2-5 minutes)

- Introduce the lesson material.
- Form students into pairs (randomly or by your design)
- Give the task and a time limit
- Call on pairs to report (option)

Tasks for learning partners*:*

- Interview each other about assigned reading
- Question each other about an assigned reading
- Read/critique each other's work
- Respond to a question posed by the teacher
- Brainstorm ideas
- Solve a problem
- Recap a demonstration on film
- Develop a question to ask the teacher

3-Step Interview

- Form pairs (randomly)
- One person is A; one is B
- Pose a question or topic
- A interviews B (give a time limit)
- THEN—B interviews A (time limit…)
- Remind pairs to use good listening skills
- Pairs join another pair to form foursomes
- Each student in turn introduces partner to the other pair and tells what the partner said in the interview ("This is my partner, Carol, and she said that.…"

Numbered Heads Together (2-5 minutes)

- Students form groups of 4.
- Students number off 1-2-3-4.
- Teacher asks a question.
- Students "put heads together" and determine the answer. Each should know and understand the answer and be ready to explain it.

- Teacher calls a number (1-2-3-or 4)
- All students of that number stand by their group.
- Teacher calls on one student to give the answer.
- REPEAT THIS PROCESS several times.

Reading Groups

Form groups of 3. Students read material together and answer the questions. One person is the READER, another the RECORDER, and the third is the CHECKER (who checks to make certain everyone understands and agrees with the answers.) They must come up with 3 possible answers to each question and circle their favorite one. When finished, they sign the paper to certify that they all understand and agree on the answers.

Jigsaw

Each person reads and studies part of a selection, then teaches what he or she has learned to the other members of the group. Each then quizzes group members until satisfied that everyone knows his or her part thoroughly.

Focus Trios

Before a film, lecture, or reading, have students summarize together what they already know about the subject and come up with questions they have about it. Afterwards, the trios answer questions, discuss new information, and formulate new questions.

Drill Partners

Have pairs drill each other on the facts they need to know until they are certain both partners know and can remember them all. This works for *spelling, vocabulary, math, grammar, test review,* etc. Give bonus points on the test if all members score above a certain percentage.

Reading Buddies

In lower grades, have students read their stories to each other, getting help with words and discussing content with their partners. In upper grades, have students tell about their books and read their favorite parts to each other.

Worksheet Checkmates

Have 2 students, each with different jobs, do 1 worksheet. The READER reads, then suggests an answer; the WRITER either agrees or comes up with another answer. When they both understand and agree on an answer, the WRITER can write it. Both sign the worksheet and turn it in to the teacher.

Homework Checkers

Have students compare homework answers, discuss any they have not answered similarly, then correct their papers and add the reason they changed an answer. They make certain everyone's answers agree, then staple the papers together. You grade one paper from each group and give all group members that grade.

Test Reviewers

Have students in groups prepare each other for a test. They get bonus points if every group member scores above a pre-set level.

Composition Pairs

Form pairs. Assign A and B.
Student A explains what s/he plans to write to Student B, while Student B takes notes or makes an outline. Together they plan the opening or thesis statement.

- Then, roles are reversed. Student B explains while Student A writes.
- They exchange outlines, and use them in writing their papers.

Board Workers

Students form groups of 3 and go together to the chalkboard.
One can be the ANSWER SUGGESTER, one the CHECKER to see if everyone agrees, and one the WRITER. Teacher gives a problem to solve, and a time limit, Teacher surveys all answers, or asks one threesome to show its work.

Problem Solvers

Give groups a problem to solve. Each student must contribute to part of the solution. Groups can decide who does what, but they must show where ALL members contributed. Or, they can decide together, but each must be able to explain how to solve the problem.

Computer Groups

Form groups of 3. Students work together on the computer. They must agree on the input before it is typed in. One person is the KEYBOARD OPERATOR, another is the MONITOR READER, and the third is the VERIFIER (who collects opinions on the input from the other two and makes the final decision). Roles are rotated daily so everyone gets experience at all three jobs.

Book Report Pairs

Form pairs. Students interview each other on the books they read, then they report on their partner's book.

Writing Response Pairs

Students read and respond to each other's paper 3 times:

- They mark what they like with a star and put a questions mark anywhere there is something they don't understand or think is weak. Then they discuss the paper as a whole with the writer.
- They mark problems with grammar, usage, punctuation, spelling, or format and discuss it with the author.
- They proofread the final draft and point out any errors for the author to correct.

Teachers can assign questions for students to answer about their group members' papers to help them focus on certain problems, or skills.

Skill Teachers/Concept Clarifiers

Students work in pairs on skills (like identifying adjectives in sentences or showing proof in math) and/or concepts (like "ecology" or "economics") until both can do or explain it easily.

Group Reports

In groups of 3-4, students research a topic together. Each one is responsible for checking at least one different source and writing at least 3 note cards of information. They write the report together; each person is responsible for seeing that his/her information is included. For oral reports, each must take a part and help each other rehearse until they are all at ease.

Summary Pairs

Have pairs of students alternate reading and orally summarizing paragraphs. One reads and summarizes while the other checks the paragraph for accuracy and adds anything left out. They alternate roles with each paragraph. Or, have students elaborate on what they are reading and learning by relating it to what they already know about the subject. This can be done before and after reading a selection, listening to a lecture, or seeing a film.

The Strategic Teacher's Self-Evaluation Checklist

> "Teaching is a constant stream of professional decisions made before, during and after interaction with the students: decisions which, when implemented, increase the probability of learning."
>
> Madeline Hunter, Author of *Mastery Teaching*

CLASS Strategies	YES	NO
Have I identified my objectives: what I want students to know and be able to do?	☐	☐
How will I articulate the objectives in an engaging way?	☐	☐
Have I previewed the text and identified key concepts and vocabulary students need to know?	☐	☐
Have I previewed the text and identified key comprehension strategies to teach/model in a mini-lesson or remind students to use?	☐	☐
Have I included CLASS strategies (including the Framing Routine) that will help my students develop a clear understanding of the key concepts?	☐	☐
Would a picture book be appropriate to introduce the key concept or model a critical thinking/comprehension strategy?	☐	☐
Have I considered the six steps to direct vocabulary instruction (Marzano)?	☐	☐
Have I reviewed the text's features and organizational patterns to identify supports and pitfalls for comprehension?	☐	☐
Have I selected an appropriate activity to help students connect new information to what they know?	☐	☐
Have I selected a graphic organizer that will help students to organize key concepts?	☐	☐
What purpose for reading will I ask students to keep in mind during reading?	☐	☐
Have I selected post-reading activities that will require students to reflect, make meaningful connections, and apply the new information?	☐	☐
Have I decided on the appropriate grouping format for each activity: Whole class, pairs, small group, and independent work?	☐	☐
Have I selected an assessment that provides feedback on learners?	☐	☐

Billmeyer, R. and Barton, M.L. (1998). *Teaching Reading in the Content Areas: If Not Me, Then Who?* ASCD: Alexandria, VA.

CLASS Lesson Plan Template

Content Area(s):	**Grade:**	**Date:**	**Time Frame:**

OBJECTIVES:	**STANDARDS ADDRESSED**:
Specify skills and information that will be learned.	State education standard that this lesson satisfies.

ESSENTIAL QUESTIONS:
List three essentials questions that guide your teaching and motivate students to learn the content.

RESOURCES AND MATERIALS:

BEFORE THE LESSON: Preparing for Understanding
✓ Conduct class openers (review, warm-up, bell work, bell ringer, etc.). ✓ Identify/introduce comprehension strategy essential for making sense of the selected text. ✓ Connect new information to background knowledge (KWL, Anticipation Guide, etc.) & anticipatory set. ✓ Read aloud picture book (could be during and after segment of lesson).

DURING THE LESSON: Engaging Students in the Content
✓ Model comprehension strategies essential for understanding: Questioning, Summarizing, Think Aloud, Marginalia, etc. ✓ Model concept/vocabulary development tools: Frayer, List/Group/Label, etc. ✓ Use teacher technique for comprehension (Graphic Organizers).

AFTER THE LESSON: Reflecting on Content and Process
Select teacher technique for comprehension: writing activity, collaborative summarizing, Somebody Wanted But So, journal/reflections, etc.

ACCOMMODATIONS and DIFFERENTIATION:
List ways you can differentiate the lessons and the assessments by modifying the content, process or products to meet the needs of specific students (above target: high group, on target: medium group, and below target: low group).

ASSESSMENT:
Specify assessment: quizzes, checklists, rubrics, logs/journals, portfolios, interactive notebook, conferences, observations, etc.

Stage				Lessons				
Before	During	After	**Strategies and Teacher Tools**					
			COMPREHENSION STRATEGIES					
			Set purpose for reading					
			Activate prior knowledge					
			Build background knowledge					
			Making connections to self, texts, world					
			Inferring and predicting					
			Asking/generating questions					
			Visualizing					
			Synthesizing					
			Determining importance and summarizing					
			Monitoring and clarifying					
			COMPREHENSION TOOLS					
			Marking text (coding)					
			KWL					
			Think aloud: model comprehension strategy					
			Marginalia					
			Exit tickets					
			Anticipation guide					
			Think, write, tear and share					
			Guided read aloud graphic organizer					
			Somebody Wanted But So (summarizing)					
			Textmapping and scrolls					
			THIEVES					
			Let your fingers do the walking					
			Scavenger hunt					
			Interactive note taking					
			Save the last word for me					
			Even dozen					
			VOCABULARY					
			6 Steps to effective direct instruction					
			Concept sorts					
			Mystery word of the day - game					
			Frayer model					
			List – group – label					
			Linear array					
			Word map					

Stage				Lessons				
Before	During	After	Strategies and Teacher Tools					
			WRITING TO LEARN					
			Writing ideas for content areas					
			RAFT					
			Quickwrites					
			Journal writing					
			6 cognitive levels					
			FLUENCY					
			Picture books as models					
			Readers' Theater					
			Independent reading					
			Teacher read aloud					
			ASSESSMENT					
			Learning styles					
			Literacy (or math, history, science) timeline					
			Data Walls					
			Biography poem template					
			Oral reading record					
			Content reading/writing questionnaire					
			Content summary					
			Writing sample					
			Surveys (Zoomerang.com)					
			SETTING GOALS/OBJECTIVES					
			Checklist of expectations					
			Learning goals (logs)					
			Contracts, course agreements					
			Lesson plan template and checklist					

Stage				Lessons				
Before	During	After	**Strategies and Teacher Tools**					
			COOPERATIVE LEARNING					
			TTYN (Turn to your neighbor)					
			Learning partners					
			Tasks for learning partners					
			3-step interview					
			Numbered heads together					
			Reading groups					
			Jigsaw					
			Focus trios					
			Drill partners					
			Reading buddies					
			Worksheet checkmates					
			Homework checkers					
			Test reviewers					
			Composition pairs					
			Board workers					
			Problem solvers					
			Computer groups					
			Book report pairs					
			Writing response pairs					
			Skill teacher-concept clarifiers					
			Group reports					
			Summary pairs					
			ORGANIZATION					
			Interactive notebooks					
			Foldables					

Chapter 2

The Adolescent Learner

LEARNING STYLES

What Is Learning Style Theory?

Most learning style theorists such as Myers-Briggs Type Indicator have settled on four basic styles. Included in this module are the following styles:

- **The Mastery Style Learner** absorbs information concretely, processes information sequentially and judges the value of learning in terms of its clarity and practicality.
- **The Understanding Style Learner** focuses more on ideas and abstractions, learns through a process of questioning, reasoning, and testing, and evaluates learning by standards of logic and the use of evidence.
- **The Self-Expressive Style Learner** looks for images implied in learning, uses feelings and emotions to construct new ideas and products, and judges the learning process according to its originality, aesthetics, and capacity to surprise or delight.
- **The Interpersonal Style Learner** focuses on concrete, palpable information; prefers to learn socially and judges learning in terms of its potential use in helping others.

Learning styles are not fixed throughout life, but develop as a person learn and grows. In the general population, the following percentages apply: 35% are Mastery learners; 18% are Understanding learners; 12% are Self-Expressive learners; 35% are Interpersonal learners.

Most learning style advocates would agree that all individuals develop and practice a mixture of styles as they live and learn. Educators should help students discover their unique profiles, as well as a balance of styles. The following pages will help the teacher and students explore their learning styles and become more aware of their needs as learners, as well as understand the unique qualities of those around them.

How Do I Use the Learning Styles Inventory?

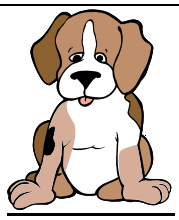
Create an overhead transparency of the four styles or poster with the pictures of clipboard, puppy, microscope and beach ball. Ask students to look at the pictures and pick the one that best represents how they like to learn. Ask students to read the attributes.

LEARNING STYLE CHARACTERISTICS

Sensing-Thinking MASTERY Students Are YOU…

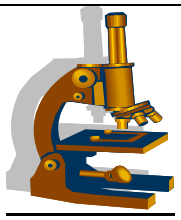
- Good at working with and remembering facts and details?
- Able to speak and write directly to the point?
- Able to complete tasks in an organized and orderly manner?
- Able to adapt to existing rules and guidelines?
- Concerned with the usefulness of things you have to do?
- Focused on immediate results and having goals?
- Good at knowing what needs to be done and generally follow through?
- Concerned with accuracy?

Sensing-Feeling INTERPERSONAL Students Are YOU…



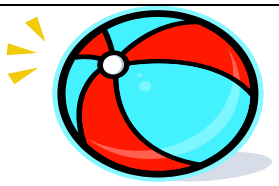
- Ready to go and open to impulses, doing what feels good?
- Able to express personal feelings?
- Aware of the feelings of others and make judgments based on personal likes and dislikes?
- Able to learn through friendships and personal experiences?
- Comfortable with activities requiring you to express feelings?
- Able to persuade people through personal interaction?
- A good observer of human behavior?
- Interested in people and try to help them?

Intuitive-Thinking UNDERSTANDING Students Are YOU…



- Able to take time to plan and think about the consequences of your actions?
- Able to organize and synthesize information?
- Able to look at the facts and make judgments based on logic?
- Able to learn through books and other symbolic forms?
- Comfortable with activities requiring logical analysis?
- Able to retain and recall large amounts of knowledge or information?
- Interested in ideas, theories, or concepts?

Intuitive-Feeling SELF-EXPRESSIVE Students Are YOU…



- Good at interpreting facts and details to see the broader picture?
- Able to express ideas in new and unusual ways?
- Able to look at tasks in a variety of ways or in an exploratory way?
- Able to adapt to new situations and procedures quickly?
- Concerned with beauty, balance, and form?
- Interested in the future and solving problems of human welfare?
- Concerned with creativity?

What does each learning style look like?

In a teacher? In a student? In the classroom?

Sensing-Thinking
MASTERY

Teachers,
Students,
Classrooms

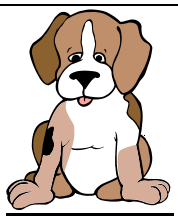
TEACHER: The Mastery Teacher is practical, hardworking and well-organized. Favorite teaching strategies include demonstration, drill, lecture, and competitive games.

STUDENT: The Mastery Student is neat, disciplined, orderly, enjoys working with others, likes competition, dislikes abstract discussions and turns work in on time.

CLASSROOM: The Mastery Classroom focuses on practical skills and essential information.

Sensing-Feeling
INTERPERSONAL

Teachers,
Students,
Classrooms



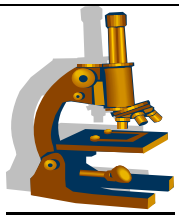
TEACHER: The Interpersonal Teacher is warm, friendly, and full of concern for others. Favorite teaching strategies include collaboration, personal discussions and small group tutorials.

STUDENT: The Interpersonal Learner can experience and respond to other people's point of view and shows unexpected depth and insight when working with others.

CLASSROOM: The Interpersonal Classroom focuses on the development of personal and social maturity and on the establishment of a healthy attitude toward self and others.

Intuitive-Thinking
UNDERSTANDING

Teachers,
Students,
Classrooms



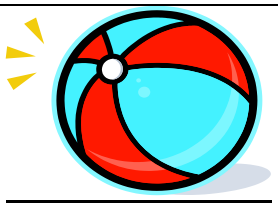
TEACHER: The Interpersonal Teacher is ingenious, logical, persistent, and loves a good intellectual challenge. Favorite teaching strategies include lecture, discussions, and debate.

STUDENT: The Interpersonal Learner wants to know why, loves discussions and problem-solving sessions, and enjoys explaining things.

CLASSROOM: The Interpersonal Classroom focuses on ideas, concepts, generalizations, principles, problems, abstractions, and debates.

Intuitive-Feeling
SELF-
EXPRESSIVE

Teachers,
Students,
Classrooms



TEACHER: The Interpersonal Teacher is enthusiastic, insightful, and innovative. Favorite teaching strategies include divergent thinking, role playing, and simulations.

STUDENT: The Interpersonal Learner keeps all options open, likes to explore possibilities, and acts to bring about change.

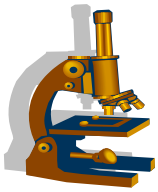
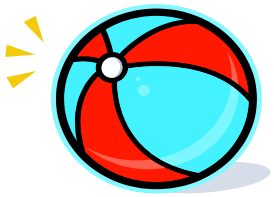
CLASSROOM: The Interpersonal Classroom focuses on the development of creative expression, the application of old skills to new contexts, and the production of original work.

How do I differentiate instruction for learning styles?

A Sample Lesson Plan

Topic: Simple Machines

- A machine is a device that does work. Machines do not increase the amount of work done, but they do make work easier.
- Machines make work easier by changing force or distance, or by changing the direction of the force.
- There are three simple machines: the lever, the pulley, and the inclined plane.

<table>
<tr>
<td>MASTERY
 
1. The wheel and axle, the wedge, and the screw are modifications of the three simple machines. List the six simple machines about which we learned.
2. Make an inventory of your house and find examples of each type. Describe the examples you found and what simple machine is a part of it. Sort the types into categories.
3. Draw and label a diagram of each of the six simple machines we have studied.
4. List and describe the three resistive forces</td>
<td>INTERPERSONAL
 
Write a letter to a friend that describes a real or imaginary trip to an amusement park. The letter must include a description of how four different simple machines are used to make several of the rides work (one simple machine per ride.)</td>
</tr>
<tr>
<td>UNDERSTANDING
 
The conditions on the moon are quite different than the earth. Research the conditions on the moon’s surface and write an essay that describes how the resistive forces are different on the moon, the effect this could have on machines brought to the moon by astronauts, and what could be some ways to lessen the problems that you have identified.</td>
<td>SELF-EXPRESSIVE
 
Rube Goldberg was a famous cartoonist known for drawing wild and funny devices. His devices worked like a chain reaction. For example, the alarm clock would startle a cat, which knocked down a vase, which pushed a lever, which tipped a pail of water on the sleeping man’s head. Your task is to design such a device on paper that uses all six simple machines which we have studied.</td>
</tr>
</table>

Biography Poem Template

Four descriptive traits…	
Lover of (3 things)…	
Who learns best by (list 3 things)…	
Who likes to read…	
Who dreams of…	
Resident of…	
Name…	

LITERACY TIMELINES

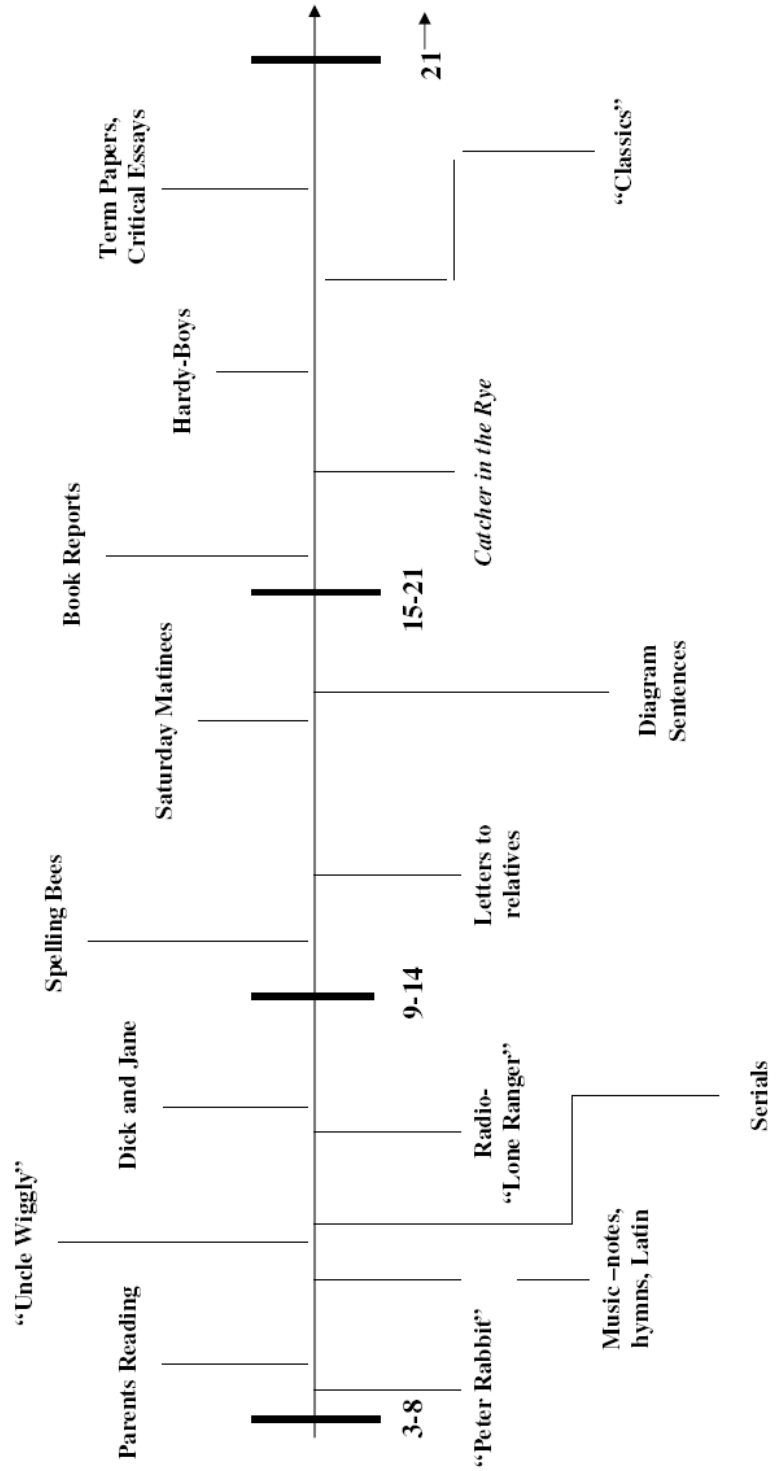
Remember your first awareness of language experiences of any *kind*.

Do you remember your first and subsequent encounters viewing and/or making letters, words, pictures, being read to by a parent or relative, reading, listening to an oral story, making up or retelling stories to friends or family, playing games, etc.?

Invent a literacy timeline – standard or otherwise- that defines your evolving literacy into general time frames: preschool, early childhood, childhood, adolescence, young adulthood, present day, and future expectations.

Use materials found at your table to portray your literacy timeline.

Personal Literacy History



INTERACTIVE NOTEBOOKS

Directions for Making Interactive Notebooks

- Use 11” x 17” colored construction paper (determine if you wish for students to use all one color, follow a specific color scheme, or choose their own colors, according to your instructional purpose).
- Create a pocketed sheet: Fold one sheet horizontally and fit it over the long side of an unfolded sheet.
- Fold the pocketed sheet in half to create a folder. Open the folder flat.
- Choose one 11” x 17” colored sheet of construction paper to use as the cover. Do not create a pocket for this sheet. Fold the cover in half. Open the cover flat.
- Stack the opened folders on the opened cover.
- Staple the pages together to make a notebook: Using a long-necked stapler, staple the folders together on the fold lines from the front side, leaving the staple ends inside the notebook to protect fingers.
- Label or decorate the cover of the notebook.
- Use gummed labels to identify the contents of individual pockets.

Ideas for Using Interactive Notebooks with Students

Following are selected ideas for using interactive notebooks with students. Each pocket should contain a model (a good example) or a demonstration (directions or criteria for creating something) and student work related to the model.

- *Writing:* Developmentally-appropriate writing strategies
- *Reading:* Samples of different types of content writing
- *Vocabulary:* Content-specific concepts
- *Expressive language: Various responses for specific types of discussions*

Value of Using Interactive Notebooks with Students

- Collect either independent work or peer collaboration
- Encourage dynamic, creative interaction with tasks (experiment, modify, expand, elaborate)
- Promote active note taking, organizational skills, higher-level thinking, pride in work
- Enable logical flow from one part of unit to another
- Accommodate variety of learning styles
- Develop agency in students

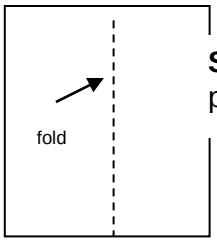
Uses of Interactive Notebooks for Instructional/Assessment Purposes

- Use for short-term to practice specific skills
- Create chronological record of work
- Incorporate in learning centers
- Demonstrate growth of the learner (similar to portfolio use)
- Analyze information to make informed decisions about instruction
- Analyze information as one component in determining a course grade

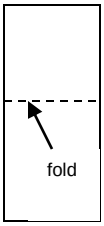
Adapted from Instructions by Elaine Weber/Macomb Regional Literacy Training Center

FOLDABLES:

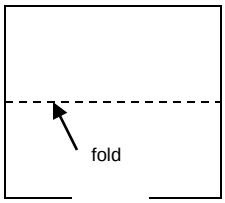
Instructions for Creating a Four Panel Foldable



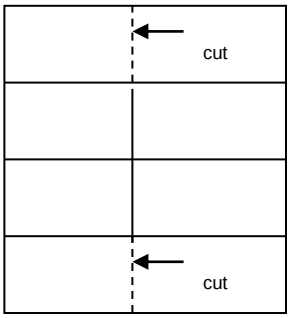
Step 1: Take an 8 ½ by 11 sheet of paper and fold it in half lengthwise.



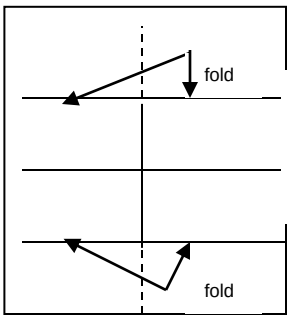
Step 2: Take your folded paper and then fold it half again lengthwise.



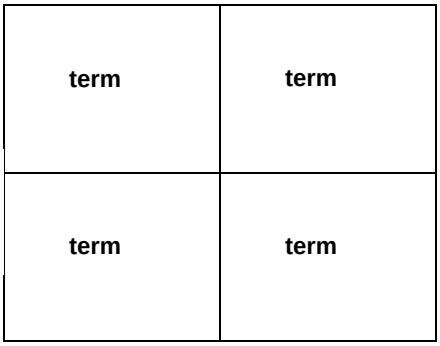
Step 3: Take your folded paper and then fold it half again.



Step 4: Take your folded paper, unfold it and cut on the dotted lines.



Step 5: Take your folded and cut paper and fold the top and bottom flaps into the middle.



Step 6: Students should label each flap with a term.

Step 7: After students have created and labeled their foldable, have them illustrate what each one means on the panels below each flap – along with a definition or explanation of the term.

Chapter 3

Tools for Building Comprehension

MIND BY RICHARD WILBUR

1. Mind in its purest play is like some bat
2. That beats about in caverns all alone,
3. Contriving by a kind of senseless wit
4. Not to conclude against a wall of stone.

5. It has no need to falter or explore;
6. Darkly it knows what obstacles are there
7. And so may weave and flitter, dip and soar
8. In perfect courses through the blackest air.

9. And has this simile a like perfection?
10. The mind is like a bat. Precisely. Save
11. That in the very happiest intellection
12. A graceful error may correct the cave.

NOTES:

MAGNIFICENT SEVEN!

Applying Comprehension Strategies: Questions to Ask Yourself While Reading

Make Connections

- Did the text remind you of anything you know about?
- Did you make any connections to your own life or to the world?
- Did you make any connections to another text?
- Did you make connections from one part of the text to another?

Inference

- Did you make any predictions as you read?
- Did you text predictions as you read along?
- Did you make interpretations?
- Did you revise interpretations as you read further?
- Did you combine background knowledge and explicit information in the text to answer questions?
- Did you make judgments or conclusions not explicitly stated in the text?

Asking Questions

- What did you wonder about while you read the text?
- What questions did you have before you read the text?
- What questions did you have after you read the text?
- What did you want to ask the author?
- What questions do you have now?

Determine Importance

- Are there some parts of the text that are more important than others?
- What words, sentences, ideas, or themes stood out as especially important? Why?

Mental Images

- Did you create any mental images in your head while you read this text"?
- Did the images emerge from any of the five senses?
- Did images emerge from your emotions?
- Did the images change as you read further?

Synthesis

- Did you connect different parts of the text to create an overall meaning or theme?
- How did you decide what the text is really about?
- If you were to tell another person about the text in a few sentences, what would you tell them?

Appropriate Fix-Up Strategies

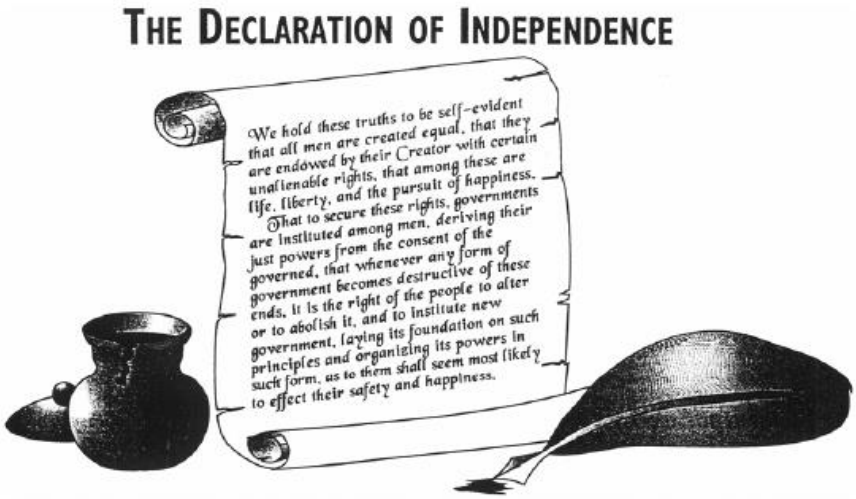
- Did you have any problem understanding the text?
- Where did comprehension break down? Why?
- What did you use to solve your problems?

From Keene, E. and Zimmerman, S. (1997). *Mosaic of Thought.* Portsmouth, NH: Heineman Publishing, Inc.

WHY TEACH COMPREHENSION STRATEGIES ?

SOCIAL STUDIES:

Use the text to answer the following question.

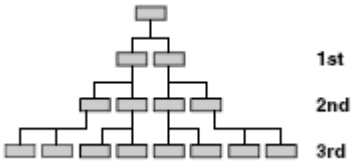


The main purpose of the Declaration of Independence was to

A. Tell why the colonies were breaking away from Great Britain.
B. Make the King give more money to the colonies.
C. Encourage more colonists to become Minute Men.
D. Give the King a chance to apologize.

MATH:

Lauren is studying her genealogy and has started a family tree of ancestors from which she is directly descended.



Lauren has been able to identify direct ancestors for six previous generations. How many direct ancestors does she have in the 6th generation before hers?

A. 12
B. 16
C. 32
D. 64

SCIENCE:

Ranchers historically have used genetics to produce new varieties of cattle. Buffalo can tolerate both hot and cold temperatures but have meat that is not as tasty and tender as beef. Cattle that are subjected to severe temperature extremes produce meat that is neither tender nor good-tasting. What good qualities might a “beefalo” (cross between cattle and buffalo) possess?

A. Animals that tolerate heat and cold but do not have good-tasting meat
B. Animals with good-tasting meat but not tolerate the heat
C. Animals that tolerate heat and cold and have good-tasting meat
D. Animals that tolerate cold but do not have good-tasting meat

ENGLISH:

Salmon Run

No one has taught them how to struggle up
On this, a run of grueling, flogging odds.
Instinctive wisdom and a will to rise
Suspends their forms against the crashing flood.
Nothing can defeat the pounding roar as
Enraged waters battle their advance.
Clinging by a hidden will they climb,
Stubborn, tireless, faithful as a dream.
Ascending higher regions of the stream.

What does this poem describe?

A. Depression
B. Punishment
C. Regret
D. Determination

STEPS TO TEACHING COMPREHENSION

- **Name and describe the strategy**
- **Tell when to use the strategy**
- **Model the strategy in action**
- **Analyze the process modeled**
- **Provide time for collaborative application**
- **Allow time for guided practice**
- **Promote independent practice**
- **Apply strategy with increasingly difficult texts**

MAPP: A CLASSROOM ROUTINE FOR TEACHING NEW STRATEGIES

- **M**odel the new strategy.
- **A**nalyze the process interactively.
- **P**air up for practicing new strategy.
- **P**ractice strategy independently.

LET'S MAP IT OUT!

OBJECTIVE: To analyze a concern, innovation, or topic
TIME: 30-40 minutes MATERIALS: Maps handout, chart paper, markers

PROCEDURE:

1. Individual or team selects a concern or new instructional technique under consideration.

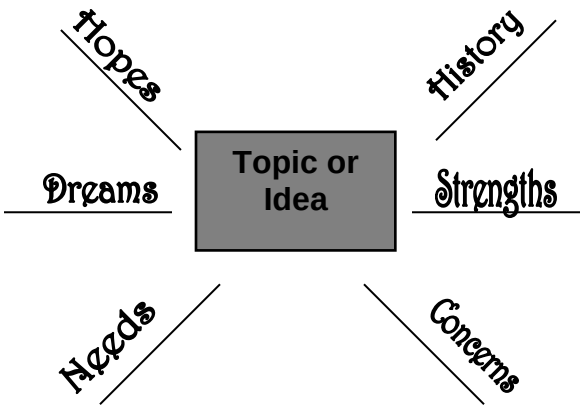
2. Team leader draws the following graphic organizer on a large piece of chart paper.

3. The facilitator writes key words while the team reflects.
   - √ **HISTORY:** Record the experiences each member has had with the topic.
   - √ **STRENGTHS:** List strong points of team members.
   - √ **CONCERNS**: Note problems, observable behaviors, keeping team from success.
   - √ **NEEDS:** Reflect on drives or what causes the observable behaviors or concerns.
   - √ **HOPES:** List in concrete terms the end result team would like to accomplish If there are five behaviors under **CONCERNS**, there should be five **HOPES & DREAMS**.

4. Brainstorm **SOLUTIONS** to extinguish behaviors listed under CONCERNS and move forward the behaviors in **HOPES/DREAMS**. If possible the solutions should incorporate the school's **STRENGTHS** and **NEEDS**.

5. The team develops an **ACTION PLAN** to carry out the solutions.

6. Meet frequently to assess the solutions and action plan.



MARKING TEXT

Also referred to as *coding the text* (Davey 1983), Chris Tovani has expanded this process to include sticky notes and highlighting. Students are taught to mark text to keep them engaged in their reading, to pay attention and remember what they've read.

Teaching Marking the Text:

1. Assign codes to the type of thinking in which you would like students to engage. As they read, students mark these **codes** next to the passages that trigger that kind of thinking, then explain the connection. Below are 9 coding examples*:*

BK stands for background knowledge. An explanation may begin with "That reminds me of…"

? represents questions students have about the text. This code indicates confusing passages.

I refers to inferences or conclusions that the reader draws from the text. Written responses may begin with "I think…"

Other Example Codes:

P **Prediction**	*** or VIP** **Determining importance**	**TS** **Text to self connection**
S **Synthesis**	**TW** **Text to world connection**	**TT** **Text to text connection**

2. Model the coding process using a passage on a transparency and model your thoughts through a think-aloud. Show how the connections you are making help you better understand the text.

3. Have students practice initially with pieces that aren't too challenging for them. They should not only mark the text, but also describe their thinking. If using a textbook that students cannot mark up, students should use sticky notes or highlighting tape.

4. Start with one or two codes initially, and add more as students become more comfortable with the process.

POST-IT NOTES

By Charlotte Foltz Jones

By now everyone knows what Post-it brand notes are: They are the great little self-stick notepapers.

Most people have Post-it Notes. Most people use them. Most people love them.

But Post-it Notes were not a planned product. No one got the idea and then stayed up nights to invent it.

A man named Spencer Silver was working in the 3M research laboratories in 1970 trying to find a strong adhesive. Silver developed a new adhesive, but it was even weaker than what 3M already manufactured. It stuck to objects, but could easily be lifted off. It was super weak instead of super strong.

No one knew what to do with the stuff, but Silver didn't discard it.

Then one Sunday four years later, another 3M scientist named Arthur Fry was singing in his church's choir. He used markers to keep his place in the hymnal, but they kept falling out of the book.

Remembering Silver's adhesive, Fry used some to coat his markers.

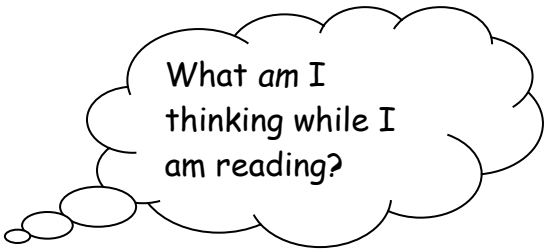
Success! With the weak adhesive, the markers stayed in place, yet lifted off without damaging the pages.

3M began distributing Post-it Notes nationwide in 1980 – ten years after Silver developed the super weak adhesive. Today they are one of the most popular office products available.

Jones, Charlotte Foltz. 1991. *Mistakes That Worked*. New York: Doubleday.

Presents the stories behind forty things that were invented or named by accident, including aspirin, X-rays, Frisbees, Silly Putty, and Velcro.

Think-Aloud for Comprehension



What is a think-aloud?
A Think-aloud is the process of describing steps used to think and question as we make meaning from oral, written, or visual text. Over time, this mental rehearsal (the steps we say aloud) becomes a natural part of our "inner voice" for thinking.

How to do it?
Think-alouds may be spoken, written, or visual. The procedure may occur in a variety of formats:

- Teacher Modeling
- Guided Practice
- Large and small group with teacher and peer monitoring
- Independent with self-monitoring

What are some think-alouds for comprehension?

- Predicting
- Summarizing
- Inferring
- Interpreting literary devices
- Noticing and understanding text elements or structure
- Connecting ideas or relationships

What are some examples?

Text	**Think-Aloud for Inference**
Charley was an old man. But there was a kind of strength about him. You could tell he had seen a lot and done a lot. But he never talked about his past.	How do you know when someone has strength? Were his shoulders hunched? Did he look sad? Maybe he didn't talk about it because he had some unhappy experiences.

Text	**Think-aloud for prediction**
But there was no peace for Charley. War had been declared. The kids were out to get him.	What kind of war can kids have with an old man? I think the kids are going to do something to his property, like throw some eggs, or break a window.

Text	**Think-aloud for point of view**
I couldn't believe my eyes when I saw it. Someone had ruined Charley's garden. Every shrub, every blade of grass, the fence – all of it had been ripped out.	I think the narrator is both surprised and upset about what happened to Charley's garden. Because he/she said "I couldn't believe my eyes…"

MARGINALIA

What is it?

Marginalia are the product of an interaction between text and reader carried on in the presence of silence witnesses.

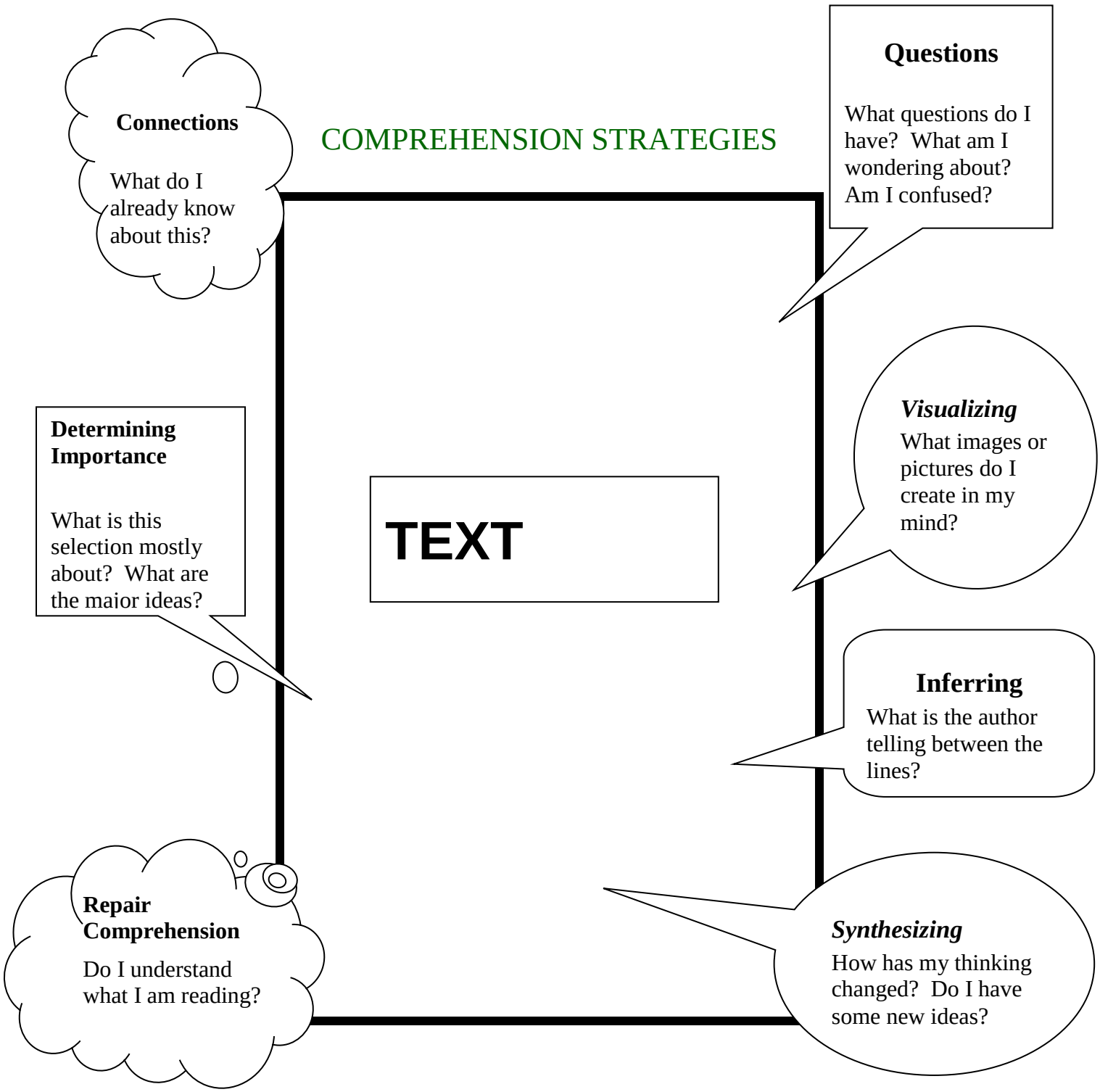
Why Use Marginalia?

The marginalia that we see and write today are in direct line of descent from those of two thousand years ago. Indeed the custom may be as old as script itself, for readers have to interpret writing, and note follows text as thunder follows lightning. In the beginning of what is called the "print culture" readers wrote in books as part of the process of learning. These notes included textual collations and corrections, explanations of hard words and obscure passages references to sources, and illustrative examples. Expressions of opinions were rare: like editors, annotators seem to have been expected to suppress private views in the interest of cumulative scholarship. Modern readers in contrast to late medieval reading only add personal reactions to the reading of the text. They also mark up books for a way of learning and remembering relevant information. Some readers engage in argument with the books they read, or expressed distaste for or disapproval of them.

How Do I Use Marginalia?

1. Select a short, simple piece of high-interest text of 3-6 paragraphs that will trigger use of comprehension strategies and take no more than 5 minutes to model a think aloud.
2. Prepare for thinking aloud by reading the text and deciding on places within text where you can stop and model how good readers use strategies to make sense of text.
3. Copy and enlarge the text to make a transparency for the demonstration. Leave space in the margins for writing.
4. Write your connections, questions, visualizations, inferences, etc., on sticky notes.
5. Begin the mini-lesson by telling students what you are going to do and to watch you so they can analyze the process later.
6. Read, think aloud to model the comprehension strategies and write what you're saying in the margins. You may choose to model only one comprehension strategy or more.
7. Discuss the process with students.
8. Assign a short text for students to engage in guided practice.

MARGINALIA



Summary:

SOCIAL SCIENCE EXAMPLE

Questions

What questions do I have? What am I wondering about? Am I confused?

Connections

What do I already know about this?

The Gettysburg Address

Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we can not dedicate -- we can not consecrate -- we can not hallow -- this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us -- that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion -- that we here highly resolve that these dead shall not have died in vain -- that this nation, under God, shall have a new birth of freedom -- and that government of the people, by the people, for the people, shall not perish from the earth.

Visualizing

What images or pictures do I create in my mind?

Determining Importance

What is this selection mostly about? What are the major ideas?

Inferring

What is the author telling between the lines?

Repair Comprehension

Do I understand what I am reading?

Synthesizing

How has my thinking changed? Do I have some new ideas?

Summary:

Cindy Bridges, Hopewell City Public Schools, 2006

MATH EXAMPLE

Connections

What do I already know about this?

Questions

What questions do I have? What am I wondering about? Am I confused?

Determining Importance

What is this selection mostly about? What are the maior ideas?

Visualizing

What images or pictures do I create in my mind?

Lesson 7-3 Solving Proportions

When two ratios are equivalent, they form a proportion. Since rates are types of ratios, they can also form proportions.

Key Concept: A proportion is an equation stating that two ratios are equivalent.

In Algebra, we would state this as

$$\frac{a}{b} = \frac{c}{d} \text{ where } b, d \text{ are not } \neq 0.$$

In a proportion, a cross product is the product of the numerator of one ratio and the denominator of the other ratio.

For example: $\frac{1}{2} = \frac{3}{6}$

1 x 6 is a cross product.
2 x 3 is a cross product.
The cross products are equal.

You can use cross products to find a missing term in a proportion. This is known as *solving the proportion*. Solving a proportion is similar to solving an equation.

Inferring

What is the author telling between the lines?

Repair Comprehension

Do I understand what I am reading?

Synthesizing

How has my thinking changed? Do I have some new ideas?

Summary:

Amy Lamb, Northumberland County Public Schools, 2006;
Text from Glencoe Mathematics Course 2 Chapter 7 2005 by McGraw-Hill Company

SCIENCE EXAMPLE

Connections
What do I already know about this?

Questions
What questions do I have? What am I wondering about? Am I confused?

Determining Importance
What is this selection mostly about? What are the major ideas?

As Earth spins around quickly, friction between Earth and water push the water ahead of the moon just a little. Over long periods of time, this friction and the timing difference between Earth's rotation and moon's slow orbit affects the synchronization of Earth and the moon. Astronomers calculate the moon's gravitational pull is slowing down the length of Earth's day. In a billion years, a day on Earth will have stretched from 24 hours to 30. Earth's gravity has pulled the moon into a synchronized orbit. As a result, we always see the same side of the moon. The moon goes through a series of phases as it orbits Earth every 29 days. The moon is lit by the sun and we see the reflected light. As the moon slowly revolves around the Earth, we see the moon face from a different angle. The line separating the light from the dark sections is called the *terminator*. The moon starts as the new moon, which we do not see. It gradually waxes, growing larger in size. About two week later, the moon is full. As the moon wanes, it becomes smaller. When the moon passes in front of the sun, the moon casts a shadow. When the shadow lands on Earth, it is referred to as an eclipse. When the moon partly blocks the sun, it is a partial eclipse and when the moon fully blocks the sun it referred to as a full eclipse.

The moon is slowly moving away from the Earth. In 10 million years, the moon's gravitation will no longer affect tides. Eventually, the Earth's rotation and the moon's orbit will synchronize. Then both the moon and Earth will be locked face to face until they cease to exist.

Visualizing
What images or pictures do I create in my mind?

Inferring
What is the author telling between the lines?

Repair Comprehension
Do I understand what I am reading?

Synthesizing
How has my thinking changed? Do I have some new ideas?

Summary:

Exit Tickets

What are Exit Tickets?

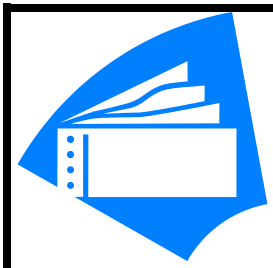
Why Use Exit Tickets?

When Do I Use Exit Tickets?

How Do I Use Exit Tickets?

I thought about how the different ideas about_____ connect. We should remember that . . .

It relates to real life in that . . .



EXIT TICKET

The most important ideas in today's lesson are . . .

One question I have is . . .

I thought about how the different ideas about_____ connect. We should remember that . . .

It relates to real life in that . . .

EXIT TICKET

The most important ideas in today's lesson are . . .

One question I have is . . .

I thought about how the different ideas about_____ connect. We should remember that . . .
It relates to real life in that . . .

EXIT TICKET

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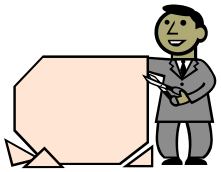


Think, Write, Tear and Share

What is it?

Tear and Share is a cooperative comprehension check up paired with Survey, Question, Read, Review, and Recite (SQ3R) reading strategy. Students incorporate "before, during, and after reading strategies.

Why use it?

The combination of these strategies (1) improves comprehension and retention of ideas and concepts, (2) integrates reading, writing, speaking, and listening, (3) adapts to both narrative and expository text, and (4) meets many of the standards.

How Do I Do It?

- Select a piece of relevant text (200-300 words).
- Create a graphic organizer or four squared worksheet with pre-determined numbered questions. (See below)
- Organize students in groups of four and ask them to number off 1, 2, 3, and 4 and remember their number.
- Students **survey** the selection for devices that spark interest and predictions: title, illustrations, captions, etc.
- Students raise **questions** about the text.
- Students **read** the text independently noting key ideas by highlighting, underlining, using post its, etc.
- Students **write** brief phrases to answer the question in each square.
- Ask students to stop writing, fold the paper into four squares, then open and tear along the creases to obtain four separate squares. Students redistribute the squares so that group member #1 has all of the #1 squares, the #2 student has all #2 squares, etc.
- Students scan the content of the squares, and then think about a short synthesis that summarizes all of the ideas.
- Students **recite** the summary statements within the group of four.
- Representatives from each group may share summary statements with the whole group. Any student may add to or challenge a summary, citing evidence from text.

Example worksheet for narrative text:

1. What are the most important ideas in this story?
2. What event did you find most surprising?
3. How would you describe the appearance and actions of the main character?
4. Does this story remind you of a personal experience or another story you read? Explain.

Example questions for informational text:

1. What are the major ideas in this selection?
2. Why are they important for you to know?
3. What ideas are worth sharing with someone else?
4. Where might you look for additional information about this topic?

Example questions for a combination of text selections about the same topic or theme:

1. What are the most important ideas in these texts?
2. In what ways are these ideas connected?
3. What style does each author use to convey his or her message?
4. What are some possible themes for these selections?

Note: Time to complete the task varies by age of the students. The process may be extended over several sessions. A "read aloud" may be substituted for independent reading.

Clingman, Cynthia (2001). "Tear and Share: A Cooperative Reading Strategy Based on the SQ#R Reading Strategy." Michigan Reading Journal, Vol. 33:3.

Reference: Robinson, F.P. (1941, 1970). "Steps in the SQ#R Method." In *Effective Study*. 4th ed.

New York: Harper and Rowe Publishers.

GUIDED READ ALOUD: USING THE MAGNIFICENT SEVEN

Set Purposes for Reading • Title: • Author: • "The title makes me think that his is going to be about…"	**Make Connections (to self, other text, world)** • "This reminds me of…"
Ask Questions • "What questions do you have about this selection?"	**Making Inferences** • "How does [name of character] feel in the beginning of the story?" • "How does [name of another character] feel?"
Visualize • "Draw one scene from the story and label it."	**Determining Importance** • "What is the most important idea on this page?"
Synthesize • What overall theme or meaning do you think would connect all the ideas in this book? • If you were to tell another person about the text in a few sentences, what would you tell them?	**Use Fix-up Strategies to Address Confusion and Repair Comprehension.** • "When you came to a part you couldn't understand, what strategies did you use?"

Anticipation Guide (Tierney & Readance, 1999)

What is an Anticipation Guide?
Anticipation guides help students to activate their prior knowledge and set a purpose for reading. They are useful when reading controversial text or text with opinions.

How do I use Anticipation Guides?

1. Identify the major concept(s) of the text or lesson and create statements and/or pull statements from the text that will challenge what readers know or believe.
2. Introduce the anticipation guide and ask students to read each one of the following statements and write whether you agree or disagree with each one.
3. Ask students to write the reasons for their position on each statement in the boxes.
4. Ask students to read the text and use the form to take notes.
5. After reading, ask the students to return to the form and respond to the column on the left by marking their positions and reasons for agreeing or disagreeing.
6. Facilitate a class discussion and compare the before and after responses.

Before Reading		**Statement**	**After Reading**	
Agree	Disagree	*Computers are better teachers than humans.*	Agree	Disagree
Why?			Why?	
Agree	Disagree	In the future, computers will wage war on us.	Agree	Disagree
Why?			Why?	
Agree	Disagree	*Life would be easier without computers.*	Agree	Disagree
Why?			Why?	
Agree	Disagree	A computer would make a good president.	Agree	Disagree
Why?			Why?	

Zwiers, Jeff. (2004). Building Reading Comprehension habits in Grades 6-12: A Toolkit of Classroom Activities. IRA: Neward, DE (page 60-61).

Somebody Wanted But So (SWBS)

What is SWBS?

The Somebody Wanted But So (SWBS) technique helps students to identify plot elements such as conflict and resolution and provides a framework for summarizing the text. With SWBS, students complete a chart by creating a SWBS statement that identifies a character, the character's goal/motivation, a conflict that impedes the character, and the resolution of the conflict. The chart has four column headings:

Somebody (character)	**Wanted** (goal/motivation)	**But** (conflict)	**So** (resolution)

When Do I Use SWBS?

While the SWBS reading tool lends itself to after reading, it can be used during the reading of specific chapters or a section of the text and with the main plot as well as subplots.

How do I Use SWBS?

1. Model the *Somebody Wanted But So* technique by reading a selection aloud and using a chart with four columns: Somebody (character), Wanted (goal/motivation), But (conflict), So (resolution).
2. Assign a story, or a chapter of a story, to the class to be read silently.
3. Working in small groups (of 2 or 3), ask the students to fill in the chart and write a statement using the information from the chart.
4. Each group shares the statement they have created.
5. Teacher and class discuss these statements.
6. The next day, students use the technique independently.

Example:

After the poem is read aloud, the class discusses who will be the *Somebody*: "I" is the only character mentioned.

1. Discuss what "I" wanted, e.g., this character wanted to stay home from school, sick in bed.

2. Then, what caused the problem?
3. But it was not a school day, it was Saturday. So, "I" recovered immediately and went outside to play.
4. Next, it is important that when students write a summary sentence using the information on the chart.

Kylene Beer (2003) book, *When Kids Can't Read: What Can Teachers Do*. Portsmouth, NH: Heinemann.

SICK **By: Shel Silverstein**

"I cannot go to school today"
Said little Peggy Ann Mckay.
"I have the measles and the mumps,
A gash, a rash and purple bumps.
My mouth is wet,my throat is dry.
I'm going blind in my right eye.
My tonsils are as big as rocks,
I've counted sixteen chicken pox
And there's one more-that's seventeen,
And don't you think my face looks green?
My leg is cut, my eyes are blue
It might be instamatic flu.
I cough and sneeze and gasp and choke,
I'm sure that my left leg is broke
My hip hurts when I move my chin,
My belly button's caving in,
My back is wrenched, my ankle's sprained,
My 'pendix pains each time it rains.
My toes is cold, my toes are numb,
I have a silver in my thumb.
My neck is stiff, my voice is weak,
I hardly whisper when I speak.
My tongue is filling up my mouth,
I think my hair is falling out.
My elbow's bent my spine ain't straight,
My temperature is one-o-eight.
My brain is shrunk, I cannot hear,
There's a hole inside my ear.
I have a hangnail, and my heart is - What?
What's that? What's that you say?

You say today is .....Saturday?
G'bye, I'm going out to play!"

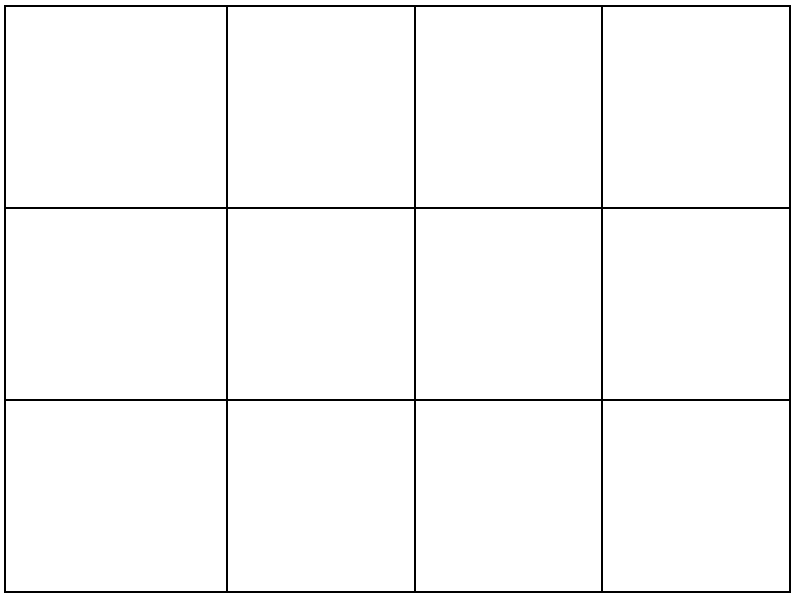
Save the Last Word For Me

1. Ask your team to read the same article or chapter.
2. If the group is large, make groups of 5 or 6 participants for discussion.
3. Each person reads the text to identify a sentence(s) or paragraph that strikes him/her.
4. Invite one participant in each group to begin by sharing his/her selected text and reacting to the passage.
5. Others may respond for 2-3 minutes, but the first person has the last word.

Even Dozen

The objectiave of Even Dozen is to synthesize information from articles, presentations, books, etc.

1. Ask groups of 5-6 to draw a square with 12 boxes on large chart paper.



2. Participants reflect on content and identify 12 critical ideas, concepts, principles from text and write one in each block.
3. Team synthesizes the ideas by reporting each concept and then linking each idea.
4. Team reports to the whole group by linking each idea to synthesize and summarize the content learned.

GOLDEN LINES

What is Golden Lines?
Golden Lines is a tool to help readers identify the most important ideas, to make connections and to create non-linguistic representations.

When do you use Golden Lines? During reading

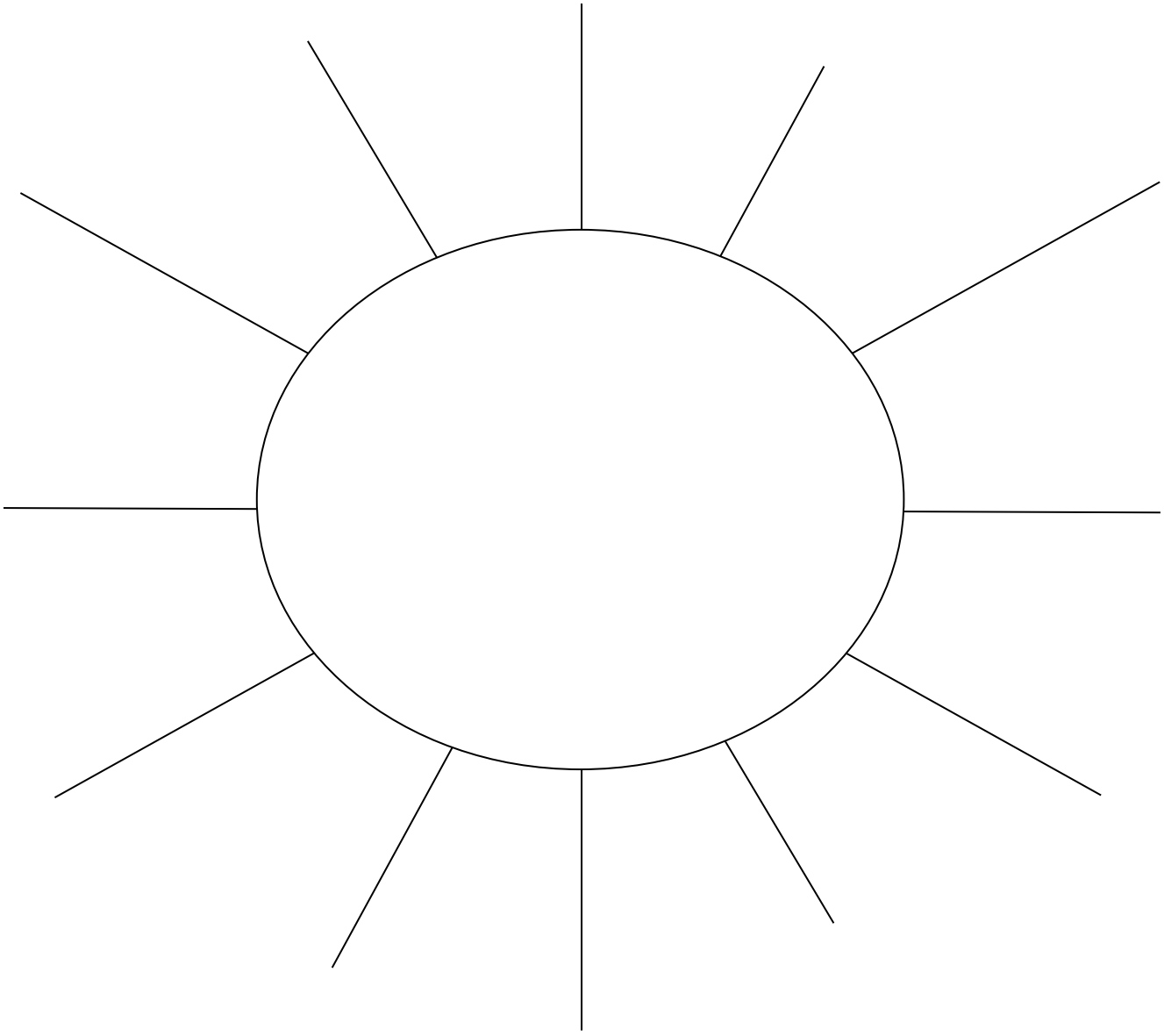
How do you use Golden Lines?
Ask students to read the text to identify "golden lines," quotations, or key statements that have special meaning or strike them as important. Students should highlight or write statement in the margins, sticky note or journal, then make a connection to their lives, other texts, or the world. Lastly, students are to draw an illustration of the "golden line" in the third box.

Golden Lines	Connections	Non-linguistic Visual Representation

CONCEPT DEFINITION MAPPING

What is Mapping?
Mapping is a tool for brainstorming and organizing information that can be used before, during and after reading text.

How do I use Mapping?
Write the topic in the center of the circle. Draw lines from the circle and write key ideas and draw pictures to represent the ideas about the topic on these lines.



USING SCROLLS AND TEXTMAPPING: TO TEACH READING COMPREHENSION SKILLS AND COURSE CONTENT

Benefits of Textmapping

1. Textmapping is explicit and enables teachers to model reading comprehension processes.
2. Textmapping teaches students to be strategic readers by enabling them to view a whole, comprehensible text.
3. Textmapping encourages students to develop active reading skills.
4. Textmapping links comprehension directly, explicitly, and concretely to the text.
5. A textmap is a traceable visual record of an individual's or group's thought process. Allows students to learn from their peers and teachers can easily monitor student's work.
6. Scrolls and Textmapping accommodate a wide range of learning styles.
7. Textmapping can be particularly helpful to individual with learning disabilities or attention deficits. Textmapping also accommodates a range of learning styles.

Important Definitions

- Typography: everything that affects the appearance of the page and contributes to the effectiveness of a printed message.
- Textstream: the linear flow of words in a text.
- Internal structure: the expository or narrative structure of a text, i.e., the flow and shift of ideas within the textstream.
- External structure: the literal, typographic structure of a text, imposed upon the text by the author and/or publisher to illuminate the text's internal structure.

Using Scrolls

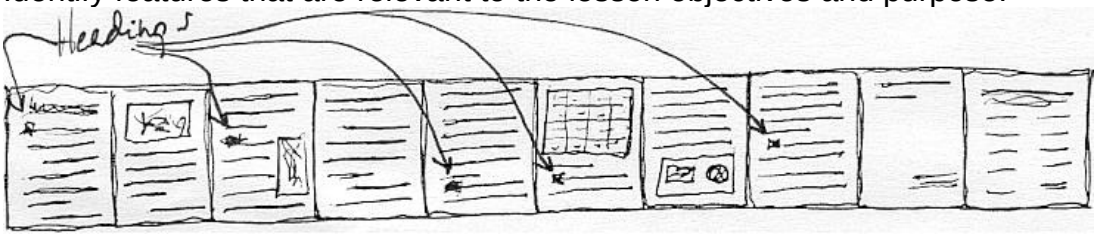
- A single text taped to the blackboard provides a common focus. The scroll and blackboard together form an extended marking area. The common text formed by blackboard and scroll provides you with more opportunities

and options for improving the clarity and effectiveness of your classroom instruction.

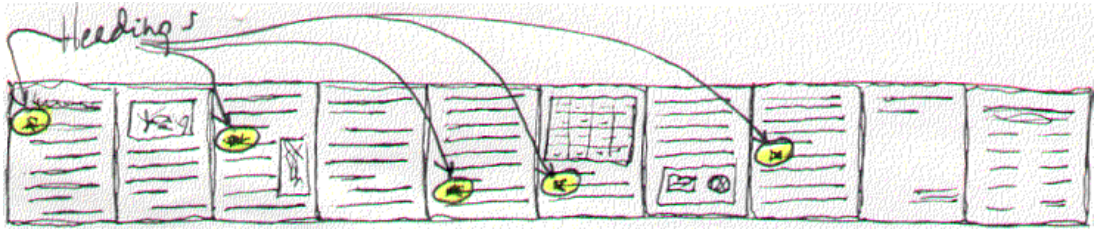
- Scrolls and textmapping are most effective when used by individuals or small groups because these are the settings that best support hands-on learning.
- Your markings on the scroll and blackboard form a cumulative record of the lesson. All that chalk on the board – linked explicitly to the scroll – makes your message concrete and explicit and provides a link to look back on as the lesson moves forward.

Mapping Scrolls

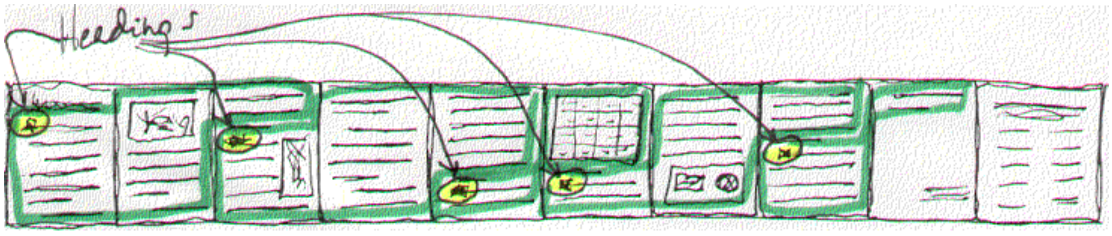
- Mapping is a specific form of marking that focuses on describing text features in spatial form.
- The value of mapping is that it enables comprehension to be modeled in great detail.
- The first step in mapping a scroll is to decide what it is that you wish to accomplish.
- In general, you will follow a three-step process
  - Identify features that are relevant to the lesson objectives and purpose.



  - Mark the features. This is an important step as there is a direct connection between marking and active reading. The more you mark the text, the more actively engaged you will become with the text.



  - Chunk informational text into relevant sections.



Procedure:

Stage I: Modeling with a Magazine Article

Demonstrate a pre-reading process using scrolls and textmapping.

Instructional Goal: this pre-reading process will prepare students to read and understand a short article. By the end of the instruction, each student will be able to:

- Accurately and completely describe the article's external structure - its features
- Draw reasonable inferences about the article's internal structure - its organization
- Draw reasonable inferences about the article's purpose, major ideas and supporting ideas

Steps in Textmapping an Article:

- Read the title: Access relevant prior knowledge through questions.
- Brown marker: Box the illustrations. Look at the illustrations and read any captions. Again access relevant prior knowledge through questions.
- Black marker: Box the textstream from beginning to end. Ask yourself, What is this about?
- Blue marker: Select the longest section of text and read the first clause of each paragraph in that section. Ask yourself, What are the ways I could sub-divide this section into smaller related chunks? Box the inferred smaller chunks within the section.
- Red marker: Read the first paragraph of each section. Continue accessing relevant prior knowledge through questions. Where possible, combine sections by inference. Box combined sections.
- Repeat last two steps until all sections that can be subdivided, are.
- Infer the article outline and summary. Example: there are six sections in this article. The first section is likely to be about…the second section is likely to be about…this is what I expect to learn from this article.

Stage II: Guided Practice: Textbook Chapter

Instructional Goal: This pre-reading process will prepare students to read and understand a textbook chapter. By the end of instruction, each student will be able to:

- Accurately and completely describe the chapter's external structure - its features
- Draw reasonable inferences about the chapter's internal structure - its organization
- Draw reasonable inferences about the chapter's purpose, major ideas and supporting ideas

Steps to Textmapping a Chapter:

This is a "guided practice". Teacher demonstrates the following actions and the students try them out. As students complete the activity have them write comments and/or questions on sticky notes and post them on your scroll. Have them write down the kind of observation, questions, and speculations a skilled reader might come up with during the pre-reading process and any questions which address implementation issues. Review the sticky notes at the end of the activity.

- Black marker: box the textstream from beginning to end
- Orange marker: divide the text into three sections: introduction, main body, and review. Mark off any sidebars.
- Brown marker: box the illustrations.
- Green marker: circle each heading and box its corresponding section.
- Blue marker: circle each sub-heading and box its corresponding sub-section.
- Purple marker: box all review questions (if any) in the main body of the text.
- Yellow marker: highlight the vocabulary words in the main body of the text.

After textmapping prompts:

- Outline the chapter.
- Ask students what they expect to learn about in this chapter.
- How can they confirm that they have highlighted all of the vocabulary words?
- How can students use the chapter review to test their comprehension?
- How can students use the questions in the main body of the text to test their comprehension?
- Indicate how each illustration relates to the text.
- Indicate how each sidebar relates to the text.

Stage III: Independent Practice: Textmapping Your Own Scroll

Let your students complete a pre-reading process using textmapping to prepare students to read and understand informational text. By the end of this activity, each student will be able to:

- ♦ Accurately and completely describe the chapter's external structure - its features
- ♦ Draw reasonable inferences about the chapter's internal structure - its organization
- ♦ Draw reasonable inferences about the chapter's purpose, major ideas and supporting ideas

Teacher completes this activity:

- ♦ Choose a photocopied text that you feel would be appropriate for the students you teach.
- ♦ Follow the directions on the Textbook Mapping Exercise provided as a handout.

Questions About Texts

- What concepts, background information, or vocabulary are needed to understand this text?
- To what extent does the text provide readers with definitions and examples to help them understand concepts?
- Are there a sufficient number of examples to help students understand concepts?
- Are important relationships (cause and effect) explicitly stated?
- Are concepts summarized or does the text require readers to select the important information and remember it?
- Do paragraphs, chapters, and selections have clear summaries of main ideas?
- What is the level of sentence complexity? Embedded clauses?
- Is the organizational pattern simple, straightforward, and clear?
- To what extent do the titles, headings, and subheading help readers find the information?
- In the writing style appealing and interesting?
- Does the text include illustrations? How helpful are they?
- Are graphic features (maps, charts, cutaways, graphs, etc.) helpful in terms of understanding information?
- To what extent does the text offer readers the opportunity to infer meaning?
- Are there opportunities to analyze the text's structure?
- Is this a text that requires readers to be critical?
- To what extent is the text interesting and appealing to these readers?

Middlebrook, R. D., Textmapping Project, dmiddlebrook@textmapping.org
www.textmapping.org

SCAVENGER HUNT:
FAMILIARIZE YOURSELF WITH YOUR TEXT

What is Scavenger Hunt?
Scavenger Hunt is a tool for previewing a textbook or book that includes a protocol of questions that guide the search for the contents of the book.

Why use Scavenger Hunt?
Use scavenger hunt to give students an overview of the material so they can develop a big picture for the contents.

How do I use Scavenger Hunt?
Create a handout of questions for small group work or present questions on enlarged text to use to guide the whole class in previewing the textbook. Students write responses.

- What is the title of the book?
- What do you learn about the book from the cover?
- Give the full name of each author. What does each author do for a living and how might their background influence their writing?
- What is the copyright of the book? How might that influence what is in the book?
- Examine the Table of Contents:
    - How many units of study are presented?
    - How many chapters are in the book?
- What type of graphic organizers are used? Maps, charts, pictures?
- What special features are presented in this book? List and describe them.
- How are new vocabulary words presented? What helps you determine if the words are "critical words" versus "nice to know words?"
- What is an Appendix? What kind of information is in the Appendix of this book?
- Where are the Glossary and Index? What type of information is presented in each? Give an example of how each works.

Other ideas or questions to add for Scavenger Hunt:

THIEVES: A TOOL FOR PREVIEWING TEXTBOOKS

Use the following acronym to preview and plan your reading of informational text. The questions may be used as think-alouds, or in written form.

T= Title *What is the title?* *What do you already know about the topic?* *Predictions:*	**T= Title**
H= Headings *What are the major headings?* *What do I predict I'll read below each heading?* *Can I rephrase each heading into a question that may be answered by the content?*	**H= Headings**
I= Introduction *Is there an italicized statement?* *How does the first paragraph introduce the selections?* *Do I already know anything about this?*	**I= Introduction**
E= Every first sentence in a paragraph *Will reading just the first sentence of every paragraph give me a quick summary?*	**E= Every first sentence in a paragraph**
V= Visuals and Vocabulary *Look for photos, graphs, and other visuals. How do they help you understand the content?* *Are there captions?* *Is there a list of key vocabulary or important words in boldface type?*	**V= Visuals and Vocabulary**
E= End-of-Chapter Questions *What do the questions ask?* *What information do they say is important?* *What information do I learn from the question?*	**E= End-of-Chapter Questions**
S= Summary *Read the entire summary as part of your preview. Note your questions.*	**S= Summary**

From Manz, S. L. "A Strategy for Previewing Textbooks: Teaching Readers to Become Thieves," The Reading Teacher, Vol. 55, No. 5, February 2002.

Chapter 4

Vocabulary & Concept Development

TWO COLUMN NOTE TAKING

RESEARCH FACTS	I THINK…

INTERACTIVE NOTE TAKING

Characteristics of Effective Direct Vocabulary Instruction.

1. Effective vocabulary instruction does not rely on _____.

2. Students must represent their knowledge of words in _____ and _____ ways to be anchored in permanent memory.

3. Effective vocabulary instruction involves the gradual shaping of word meanings through_____ _____, by identifying _____ ___ _____, classifying, creating metaphors and analogies.

4. Teaching _____ _____enhances students' understanding of terms because it enables students to determine _____ the meaning of _____ words.

5. Different types of words require _____types of instruction.

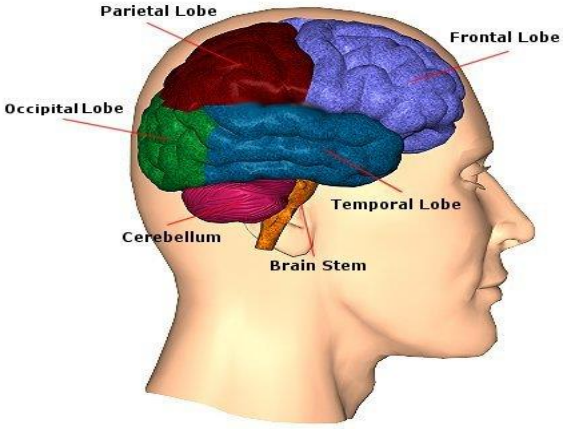
6. Students should _____ the terms they are learning to deepen understanding and increase the probability of storing words in _____ _____.

7. Students should _____ with words through _____ that generate challenge, curiosity, enthusiasm, and excitement.

8. Instruction should focus on terms that have a high probability of enhancing academic success using _____ _____ _____.

(Building Background Knowledge for Academic Achievement, Robert Marzano, 2004, pages 70-90)

BRAIN ENRICHMENT VARIABLES



Brain Enrichment variables are the factors that stimulate the brain. When teachers are planning strategies that involve students they should be sure the strategies meet the brain enrichment criteria.

Challenge:

Novelty:

Feedback:

Coherence:

Time:

CONCEPT SORTS

What Are Concept Sorts?

Concept or word sorts help students understand relationships and make connections among key concepts (Gillett & Temple, 1983). Students sort words into different categories. Teachers may use a closed sort or open sort to teach or review words. The categories into which students sort the words are given to students in a closed sort. The open sort is more difficult; students must sort the words and then identify an appropriate label for the category.

When Do I Use Concept Sorts?

- As advance organizers before reading
- As a reflection and review activity after reading
- To organize ideas before writing
- To teach grammar: words can be sorted by parts of speech
- To pre-teach vocabulary and technical terms in all subject areas
- To assess and provide background knowledge before embarking on a new unit of study

How Do I Use It?

1. Students copy terms onto index cards, or cut pre-made words from teacher-made lists.
2. For difficult concepts, the teacher may provide the categories and ask students to sort the words.
3. Students may work in pairs, groups, or independently.

CONCEPT SORTS: LITERACY & LEARNING STRATEGIES

1. Open Sorts: List all the techniques and strategies you will use to increase comprehension, vocabulary and concept development.

2. Closed Sorts: Categorize the techniques and strategies you can use to increase comprehension, vocabulary and concept development into the three stages of instruction.

Instructional Stage	Comprehension	Vocabulary
BEFORE INSTRUCTION		
DURING INSTRUCTION		
AFTER INSTRUCTION		

SOCIAL STUDIES CONCEPT SORT: Movements

Suffrage Movement	**Reduced work hours**	**Freedom Riders**
End slavery	**18th amendment**	**Increased educational opportunities**
Boycotts and sit-ins	**Harriet Tubman**	**Rosa Parks**
Workplace reform	**alcohol**	**Abolitionist Movement**
Improved safety conditions	**William Lloyd Garrison**	**Speakeasies**
Montgomery Bus Boycott	**Elizabeth Cady Stanton**	**Passive resistance**
Voting Rights for women	**Progressive Movement**	**Voting Rights Act of 1965**
Temperance Movement	**Brown v. Board of Education**	**The *Liberator***
Placed restrictions on child labor	**19th amendment**	**Prohibition**
Bootlegging	**Civil Rights Movement**	**NAACP**
Martin Luther King	**Susan B. Anthony**	**Frederick Douglass**

Cindy Bridges, Hopewell City Public Schools, 2006

SOCIAL STUDIES CONCEPT SORT

CONGRESS	**PRESIDENT**	**HOUSE OF REPRESENTATIVES**
LIFETIME TERM	**SPEAKER OF THE HOUSE**	**SUPREME COURT**
ENFORCES THE LAW	**OVERTURN VETO**	**INTERPRET LAWS**
VETO POWER	**SENATE**	**2 YEAR TERMS**
6 YEAR TERMS	**IMPEACH**	**DEPARTMENT OF EDUCATION**
REPRIEVES/ PARDONS	**APPOINTS JUDGES**	**REFUSE APPOINTMENTS**
4 YEAR TERMS	**DECLARE UNCONSTITUTIONAL**	
PRESIDENT	**MAKES LAWS**	

Macomb Regional Literacy Training Center, 2003

MATH CONCEPT SORT: SOL 8.2 CONCEPT SORT

Directions: Place the numbers listed below under the correct column heading. Cut out each column heading and glue onto your construction paper. Leave some space between each column heading.

A Whole Number that is not a Natural Number	Rational Numbers that are not Whole, Natural, or Integers	Integers that are not Whole Numbers	Irrational Numbers	Rational Numbers	Natural Numbers	Real Numbers

Use these numbers to place under the headings listed above. Keep in mind that you may need to put a number in more than one category. You may write these numbers under the correct headings.

18	**31**	**5/8**
-7.32	**2.3333….**	**Square root of 16**
½	**9.8**	**4.563218954….**
6.8	**1**	**Square root of 12**
0	**1.5**	**-99**
-45	**-78**	**15/3**
12	**72.6**	**35%**

With your partner, list two of your own numbers to place under each column heading.

Amy Lamb, Northumberland County Public Schools, 2006

MATH CONCEPT SORT

TRIANGLE	**LINE**	**SQUARE**
RAY	**RADIUS**	**OBTUSE ANGLE**
PERIMETER	**RECTANGLE**	**DIAMETER**
RHOMBUS	**CIRCUMFERENCE**	**ISOSCELES TRIANGLE**
ANGLE	**RIGHT ANGLE**	**PARALLELOGRAM**
DEGREES	**AREA**	

SCIENCE CONCEPT SORT

NITROTGEN	**HAIL**
ROCK	**GASOLINE**
IRON	**COAL**
NEON	**URANIUM**
CARBON DIOXIDE	**HYDROGEN**
BLOOD	**GOLD**

Macomb Regional Literacy Training Center, 2003

SCIENCE CONCEPT SORT: PHYSICAL PROPERTIES

Shape	vaporization	1's slider	condensation
adjustment knob	Gas	pointer	sublimation
Color	Boiling	"Testable" Physical Properties	deposition
Smell	100's slider	conductivity	Phase or State Changes
evaporation	texture	Qualitative Observations	solid
freezing	10's slider	liquid	solubility
ductibility	melting	Parts of a Triple Beam Balance	pan
Taste	buoyancy	Phases or States of Matter	
Shape	vaporization	1's slider	condensation

Shandra Dunn, Williamsburg/James City County Schools, 2006

LANGUAGE ARTS CONCEPT SORT: STRATEGIES

THINK ALOUD	**USE CONTEXT CLUES**	**PREDICT**
VISUALIZE	**K-W-L**	**PREVIEW**
SKIM	**SUMMARIZE**	**MARGINALIA**
BROWSE THROUGH TEXT	**RETELL**	**MAPPING**
USE GRAPHIC ORGANIZER	**REFLECT**	**ANTICIPATION GUIDE**
REREAD	**INFER**	**SWBS**
POSE QUESTIONS	**TAKE NOTES**	**FRAYER**
MAKE QUESTIONS	**BRAINSTORM**	**WORD SORT**

Macomb Regional Literacy Training Center, 2003

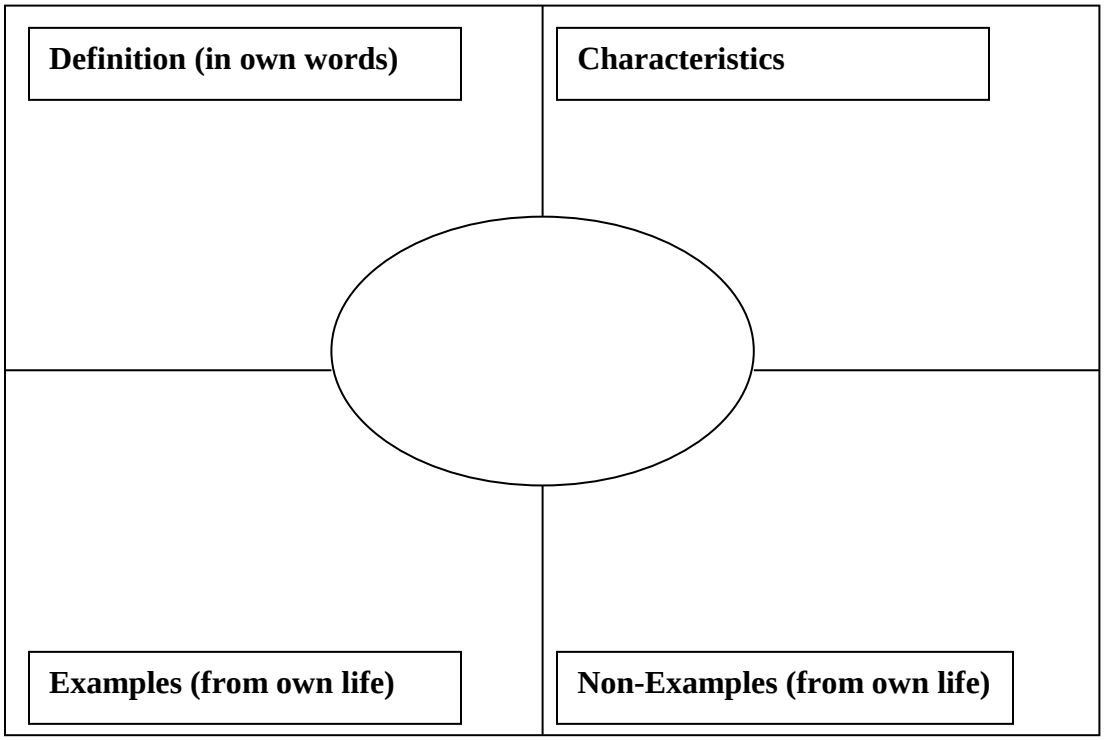
FRAYER MODEL

What is the Frayer Model?
The Frayer Model (Frayer, Frederick & Klausmeier, 1969) is a word categorization activity. This approach emphasizes learning that helps the student to understand what a concept is, and what it is not. After analyzing the essential and non-essential characteristics, learners consider examples and non-examples to further clarify their understanding of the word.

When Do I Use the Frayer Model?
The Frayer Model is especially useful before reading the text in introducing concepts.

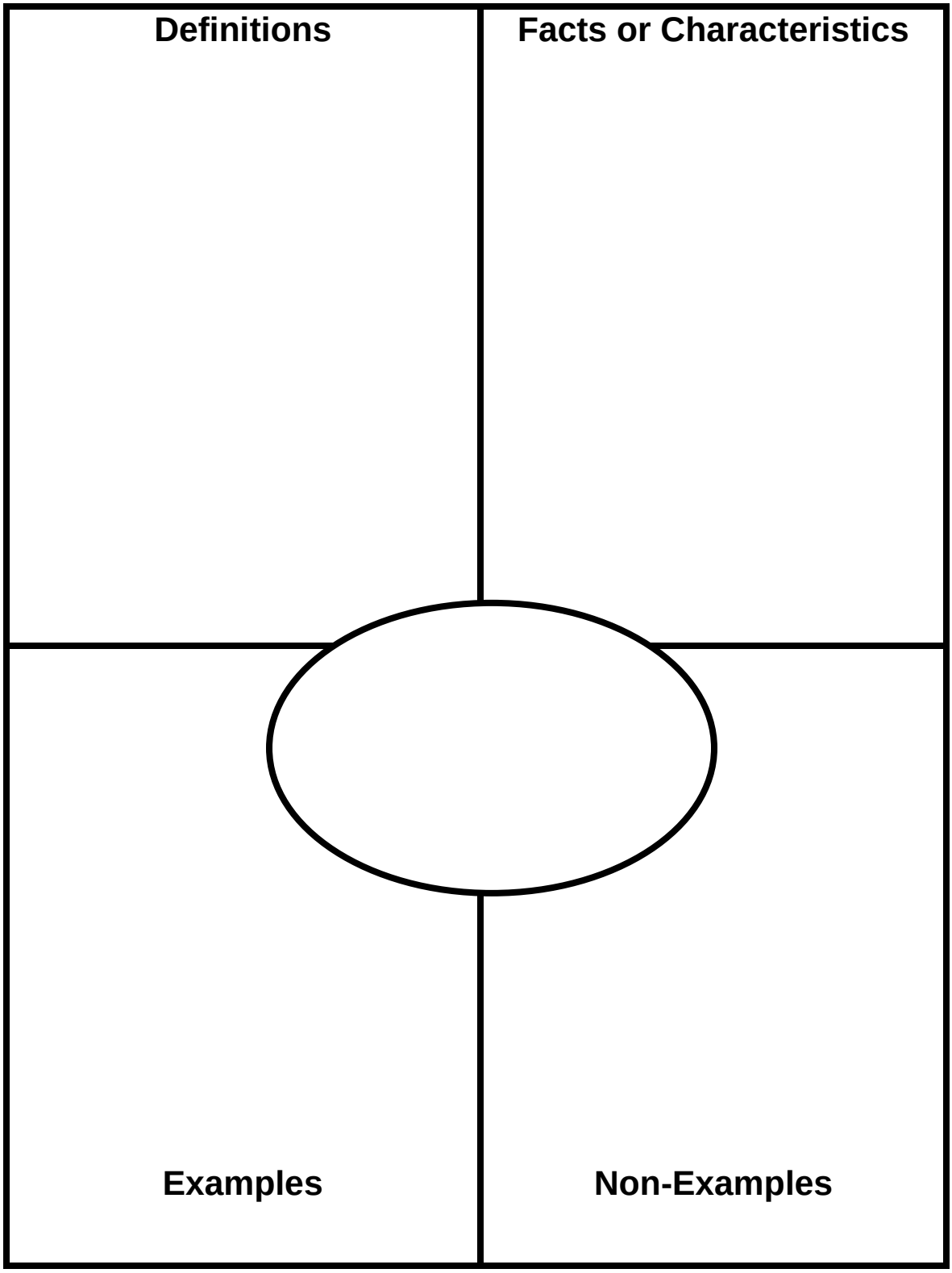
How Do I Use the Frayer Model?

1. Assign the word or concept being studied
2. Explain the structure and all the attributes of the Frayer Model.
3. Complete a simple model with the students.
4. Have students work in pairs and complete the model in guided practice.
5. Have students share their work

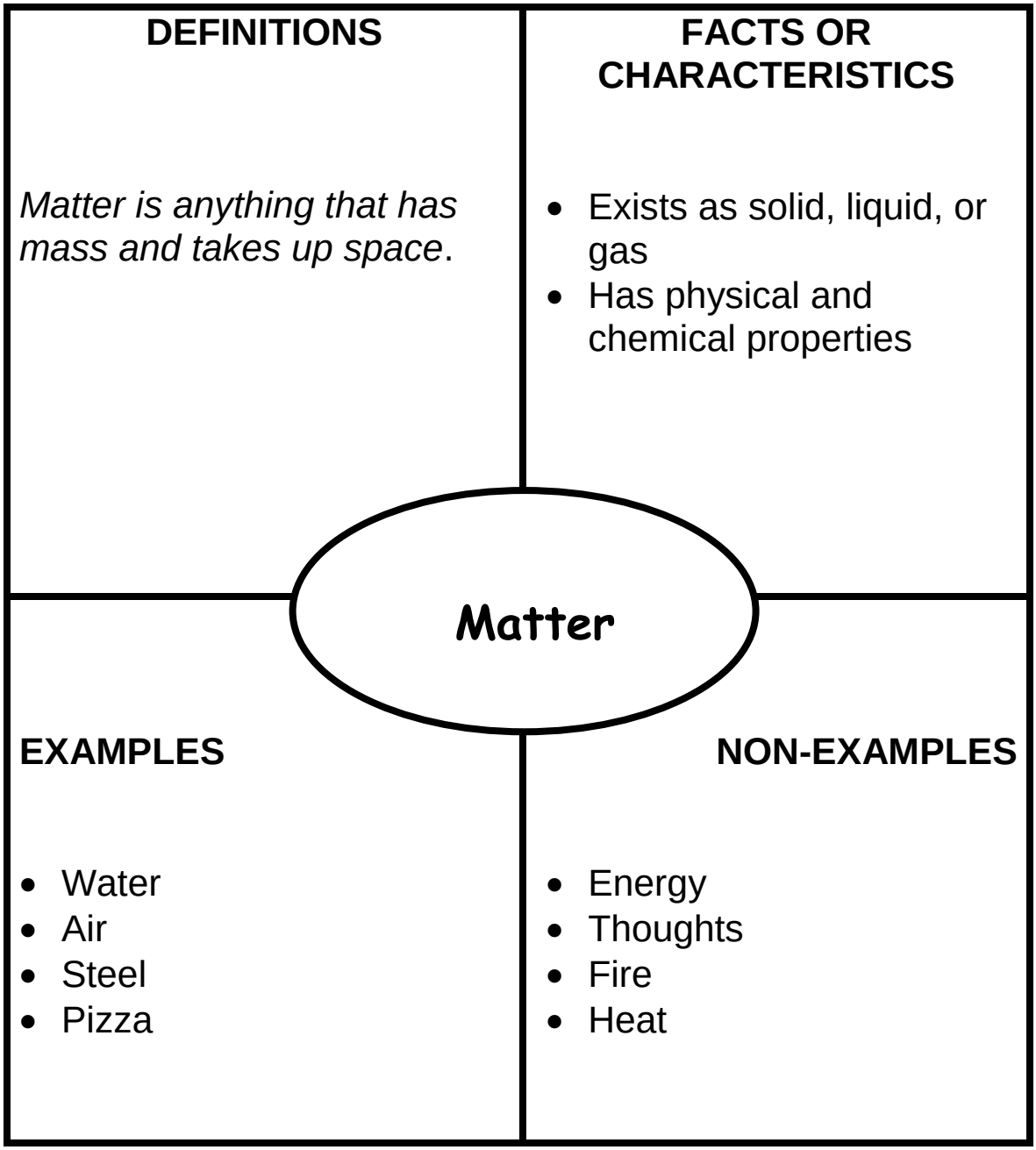


From "A Schema for Testing the Level of Concept Mastery," 1969 D.A. Frayer, W.C. Frederick, and H.G. Klausmeier, in Technical Report No 16, University of Wisconsin

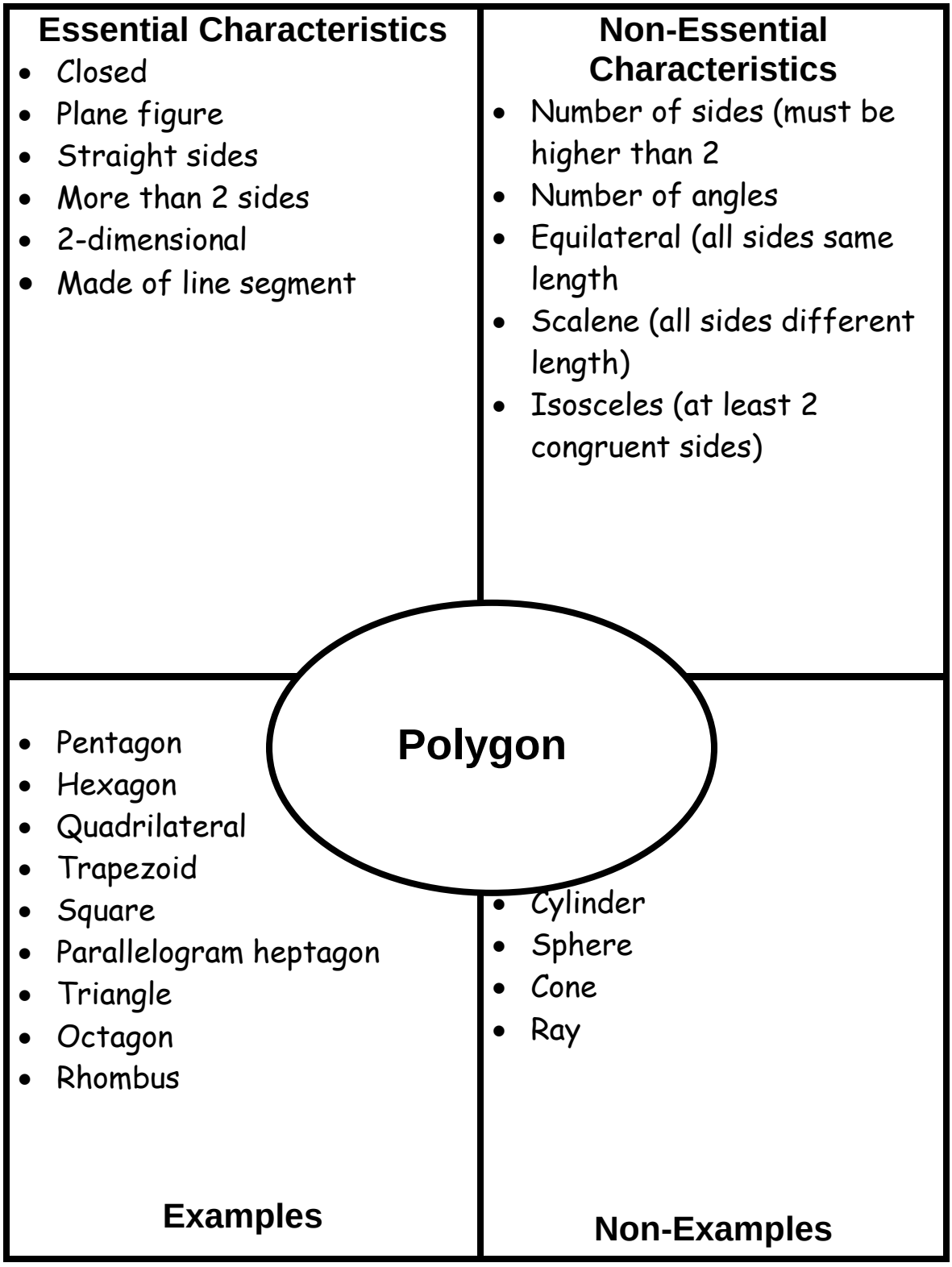
FRAYER MODEL:



FRAYER MODEL FOR SCIENCE



Frayer Model for Mathematics



Macomb 2004

HOW TO USE FRAYER'S MODEL TO DEVELOP STUDENT UNDERSTANDING OF THEMES

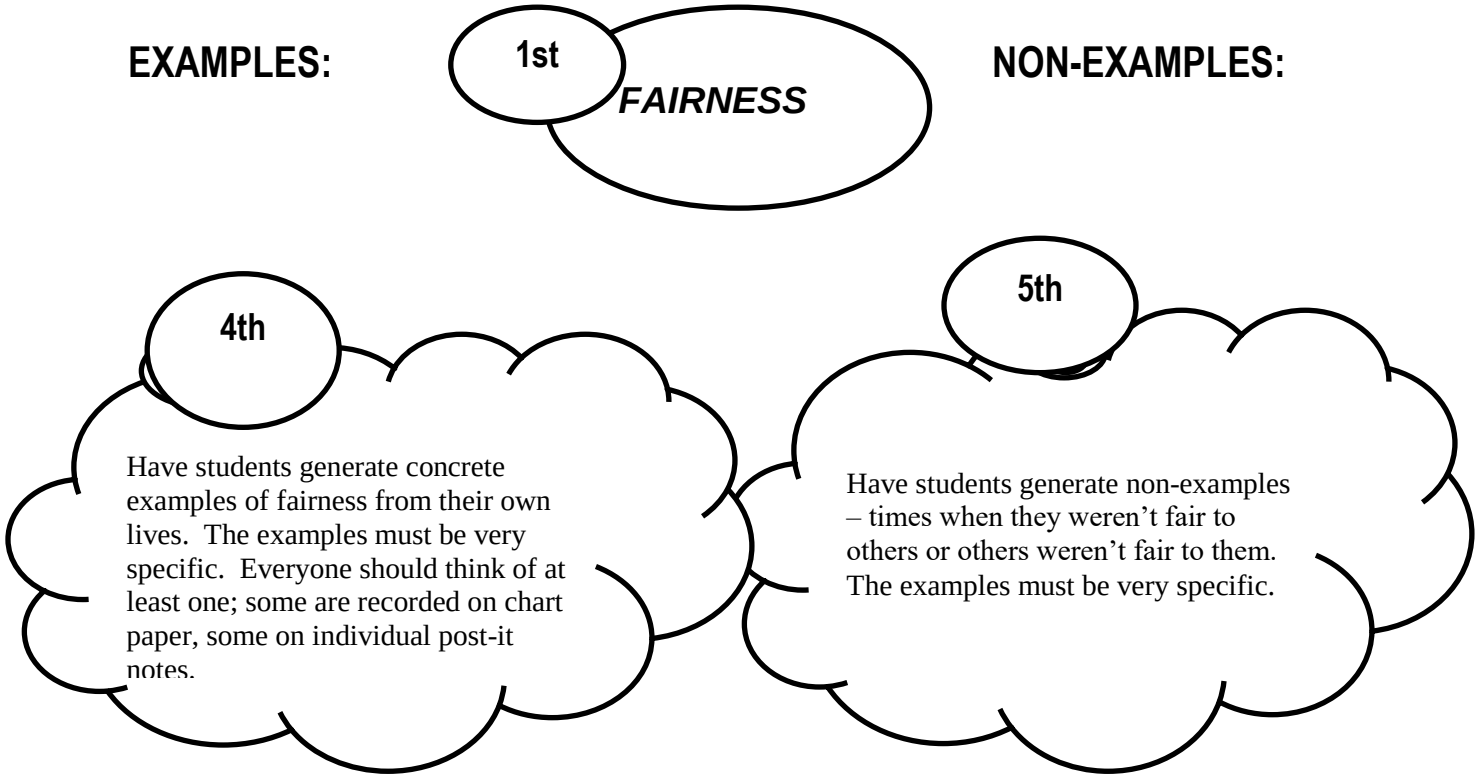
FAIRNESS IS…

FAIRNESS IS NOT…

State theme in center oval

EXAMPLES:

NON-EXAMPLES:



6th: Read a book about "Fairness" that is not in the prototype. Have students listen for clear examples and non-examples of fairness. Use names and situations specific to the reading selection, when recording the examples.
7th: Have students identify clear examples from the 1st reading selection to record on the chart.
8th: Have students identify clear examples from the 2nd reading selection to record on the chart.
9th: Have students listen for clear examples and non-examples of fairness during part three of the prototype to record on the chart.

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LIST - GROUP – LABEL

What is List-Group-Label? (Hilda Taba (1967)

Originally used for science and social studies vocabulary, List-Group-Label is based on the use of categorization as a way to teach students to organize their verbal concepts.

How do I use List – Group – Label?

- Students are first given the topic
- Next they brainstorm all related words
- Last, they reorganize the words and give the list a label: measurement tools, space figures, words with six letters, words beginning with "s", curved surfaces

The following are geometry terms:

square
cubic centimeters
math
volume
area
cube
pyramid
cone
sphere
symmetry
ruler
circle
square inches
equilateral
rectangle
triangular prisms
base
side
cylinder
prism
face
edge
congruence
surface
compass
triangle
corner
circle

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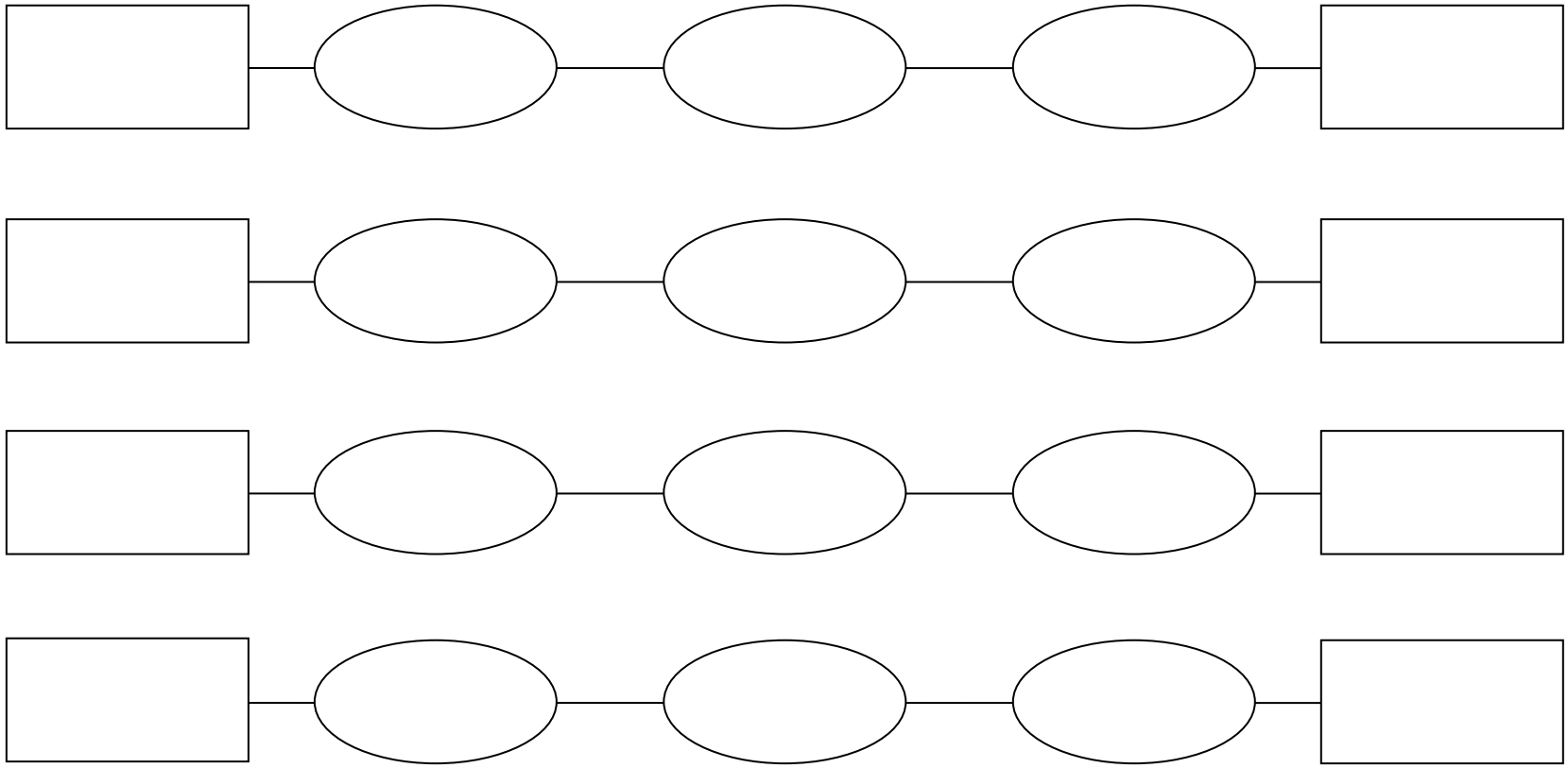
Semantic Gradient: Arrange words in a series.

E. 13 Linear Arrays



LINEAR ARRAY

Always Certain Frequently Often Likely Probably More than even Even chance Less than even occasionally unlikely seldom rarely never	**Arrange this list from hottest to coldest.** Hottest--------Coldest cool hot lukewarm boiling freezing tepid chilled warm

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LINEAR ARRAY- SCIENCE

molecule

element

mixture

compound

atom

Shandra Dunn, Williamsburg/James City County Schools

WORD MAP

Word _____

What does the word mean?

Draw the word in action.

Write the word with other endings.

Mystery Word of the Day Cards

Clue # 1:

People use_____ everyday.

Clue #2:

A (n) _____ is an important tool for scientists.

Clue #3:

_____ may require numeric measurements.

Clue #4:

_____ help us differentiate between similar objects.

Clue #5:

We use our five senses to make _____.

Clue #6:

Accurate _____ are necessary to draw realistic conclusions.

VOCABULARY PROGRAM

Teacher Checklist

Teacher shows enthusiasm for words and word learning.

____ Daily read-aloud

____ Word of the day or word activity the of day

____ Students indicate teacher loves words

Teacher provides word-rich environment.

____ Word charts/posters (showing student input)

____ Books on words, word play

____Word games

____ Puzzle books and software

Teacher models, supports, and develops good strategies.

____ Rich instruction on content area vocabulary

____ Use of mapping, webbing, and other graphics to show word relationships

____ Multiple exposures and chances to see, hear, write, and use new words

____ Emphasis on students using strategies

____ Word play and motivation activities

Teacher uses varied assessments.

____ Differ depending on goal

____ Differ depending on entry knowledge of learner

____ Assess both depth and breadth

Summarized from *Teaching Vocabulary in All Classrooms* by Camille Blachowicz and Peter J. Fisher

VOCABULARY LESSONS

Lesson 1: **Follow the Six Steps to Effective Vocabulary Instruction** (Marzano, Building Background Knowledge for Academic Achievment, 2004).

STEP ONE: Provide a description, explanation, and an example of new terms. Avoid relying on definitions, i.e., looking up word in the dictionary, writing the definition, and using the new word in a sentence. Use everyday language to describe the new word providing key features.

STEP TWO: Students write the explanation of the new term in their own words rather than copy the teacher's explanation. Students store information of new terms in an academic notebook on pages that have three columns: My Description, Graphic Representation, and New Insight. Step two corresponds to the first column with the student's explanation.

STEP THREE: Students create a nonlinguistic representation of the term. Immediately after students write their linguistic description of the new term, they create a visual – graphic organizer, picture, pictographs or maps.

STEP FOUR: Students engage in multiple exposures and activities to interact with the term in various ways: comparing, contrasting, metaphors, analogies, revising initial descriptions or nonlinguistic representations, and roots and affixes.

STEP FIVE: Organize students into pairs or groups to discuss the new words in their vocabulary section of their notebooks and share: their visuals, challenging words, favorite words, questions, etc.

STEP SIX: Use games as sponge activities and as tool for learning vocabulary development, provide multiple exposures, and stimulate interest and enthusiasm for words.

Lesson 2: Students learn more words when we focus on fewer words and use those words in our own speech.

Lesson 3: Teaching students how to use the context as a clue requires that students see relationships among words and can make inferences about the passage.

Lesson 4: Do some vertical planning with teachers in your school to determine which roots and affixes will be systematically taught in which grades. Use graphic organizers such as vocabulary trees to help students learn roots.

Lesson 5: Take advantage of students' sense of discovery and play by making use of word puzzles.

Lesson 6: Use graphic organizers to build word knowledge.

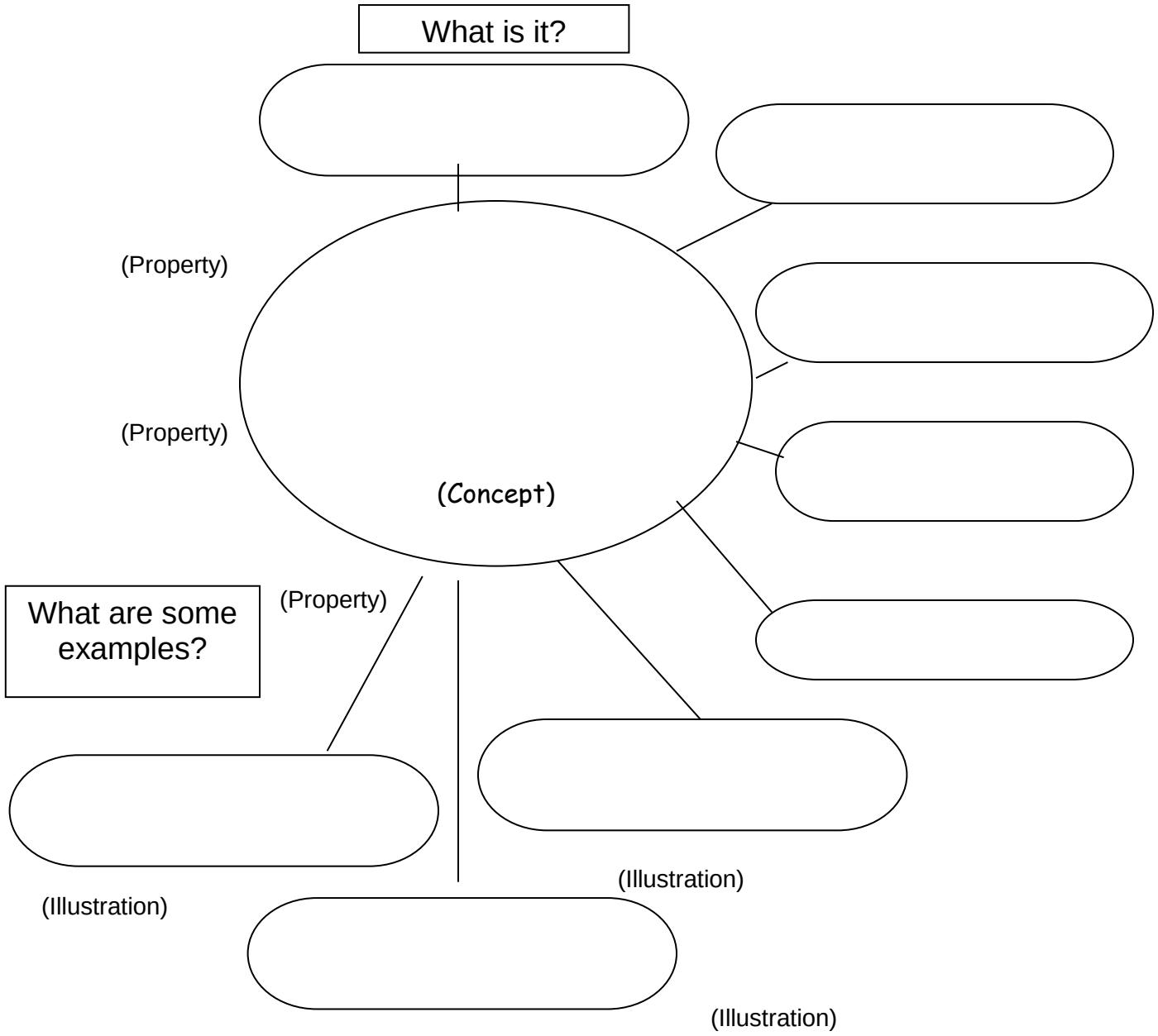
Lesson 7: Let students create logographs as a tool for remembering words.

Lesson 8: Incorporate reading aloud and sustained silent reading into your instructional program.

Lesson 9: Ask students specific questions about their word knowledge and use their answers to help inform your instructions.

Name_____
Date_____

Concept Definition Map



New Definition

_____
_____
_____

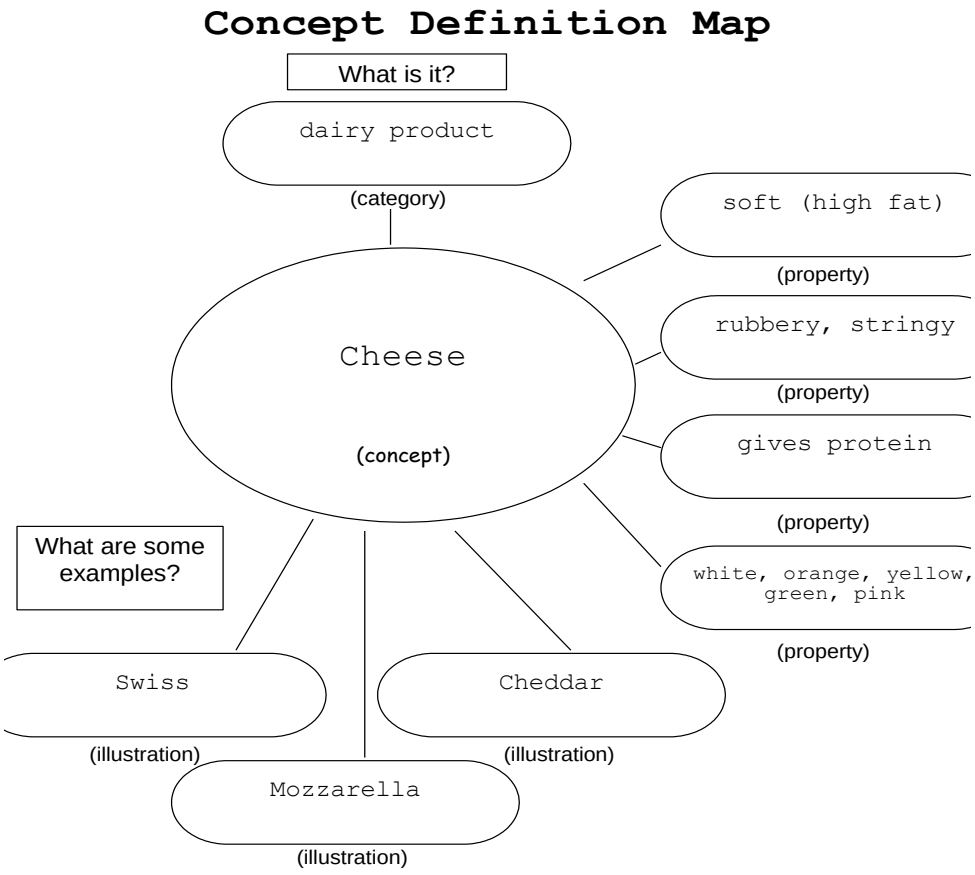
Concept Definition Maps

Concept Definition Maps are graphic organizers that promote understanding of a word's many levels of meaning. They go beyond dictionary definitions and encourage the application of personal knowledge (Schwartz, 1988). You can use them to pre-teach difficult vocabulary at all grade levels, but intermediate and middle school students can use them on their own with great success.

Start by displaying a blank map on the overhead transparency and, in the center, write a familiar word such as *cheese*. (See sample below.) Ask for a definition of the word. A student might say, "a food that goes on pizza." Then think aloud as you supply the vocabulary terms to fit the boxes on the map. Be sure to discuss how you arrived at these terms and then write a new, more complete definition at the bottom of the map.

When students understand how to use the concept definition map, give them a new word from their science or social studies curriculum, and have them work in pairs to create their own maps. Encourage students to use information from the glossary, dictionary, and their own background knowledge. Then, using all their information, have them write a new definition that is fuller and more meaningful than the one in the dictionary.

Name_____ Date_____



New Definition

Cheese is a dairy product that can be soft, stringy, rubbery, or hard and can be called Cheddar, Swiss, Mozzarella, Longhorn, and Colby. It gives us protein and fat.

ABC Graffiti

A_____

B_____

C_____

D_____

E_____

F_____

G_____

H_____

I_____

J_____

K_____

L_____

M_____

N_____

O_____

P_____

Q_____

R_____

S_____

T_____

U_____

V_____

W_____

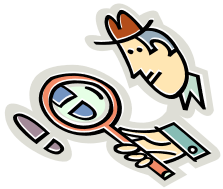
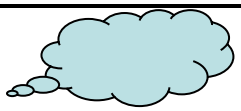
X_____

Y_____

Z_____

Vocabulary Rubric
How well do I know these terms?

Directions: First, read the words at the bottom of the page silently. After you read each one, write the words from the bottom of this page in the column that best describes what you know about each one.

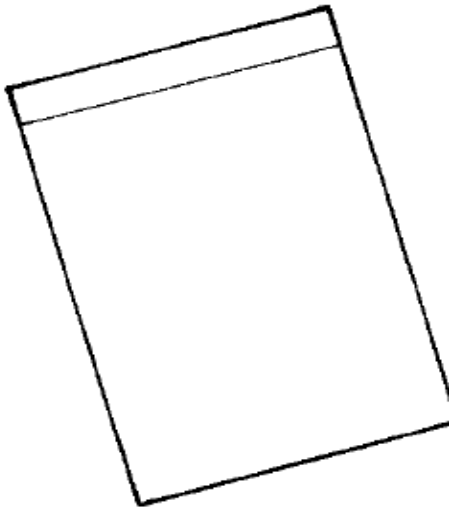
			
No Clue	Heard-Don't know	I Think I Know	I Know It!

Vocabulary Graphic Organizer

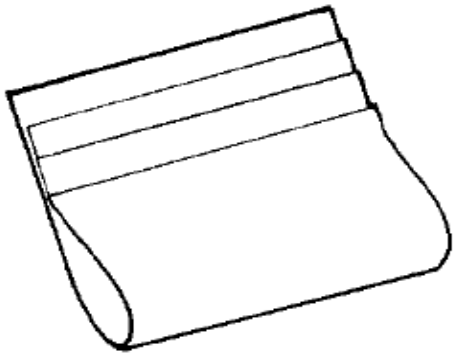
My Description	Graphic Representation	New Insights

Layered Look Book

1. Stack two (or more) sheets of paper (8 1/2 x 11), and place the back sheet one inch higher than the front sheet. (Use less than one inch between when using more than two sheets of paper.)

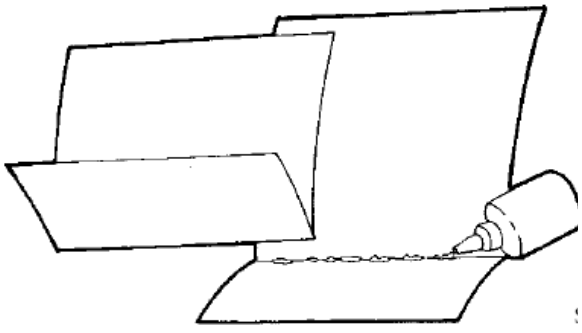


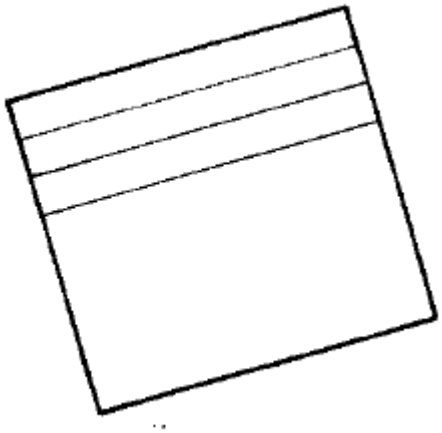
2. Bring the bottom of both sheets upward and align the edges so that all the layers or tabs are the same distance apart.



3. When all tabs are an equal distance apart, fold the papers and crease well.

4. Open the papers and glue them together along the valley/center fold. (Or you may staple the edge)





Chapter 5

Writing to Learn

LANGUAGE ARTS WRITING TO LEARN CHOICES	SOCIAL STUDIES WRITING TO LEARN CHOICES	MATHEMATICS WRITING TO LEARN CHOICES	SCIENCE WRITING TO LEARN CHOICES
Emails Letters Editorials Reflections Notes Observations Statistics Interpretation Poems Graphs Charts Comparisons Raps/songs Cheers Jingles Songs Opinions Analysis Interviews Final reports Outlines Note cards Outlines Research Journals Diaries Critiques Summaries Quick writes Class notes Brainstorm Literacy strategies	**Data gathering** Research Interviews Graphs Map Labels Statistics Timelines Reports Charts Notes Descriptions Diaries Poems Songs Ads Historical records References Lists Logs Email Brainstorm historical reflections Graphic organizers Quick writes Literacy strategies	**Data** Interpretation Summarize Write conclusions Word problems Describe procedures Timelines Charts Note taking Labels/graphs Write reports Diagrams Direction writing Journaling Outlining rules Explaining formulas Analyze statistics Comparisons Showing work Identifying problems Quick writes Literacy strategies	**Collect & record data** Conduct interviews Create songs Conduct experiments Note taking Observations Logs Reports Analyze statistics Summarize theories Hypothesize Emails Descriptive writing Lists Writing articles Graphic organizers Opinion papers Quick writes Literacy strategies

QUICKWRITES IN JOURNALS

What is it?

Journal writing is a short piece of writing that allows students to:

- Make personal connections to the material they are studying,
- Think about, learn ad understand course material,
- Collect observations, responses and data, and
- Practice their writing before turning in or being graded.

Why do I use journals?

1. Writing the connections made between new knowledge and what is already known helps learners to comprehend new information better (Bruner, 1977)
2. When people think and figure things out, they do so in symbol systems or languages: verbal, mathematical, musical, visual, etc. (Vygotsky, 1962).
3. When people learn things, they use all of the language modes to do so: reading, writing, speaking, listening (Emig, 1977).

How do I do It?

1. Explain that journals are neither "diaries" nor "class notebooks", but borrow features from each. Like the diary, journals are written in the first person about issues the writer cares about. Like the class notebook, journals are concerned with the content of a particular course.
2. Ask students to buy loose-leaf notebooks. With binders, students can hand in only that which pertains directly to your class, keeping more intimate entries private.
3. Suggest that students divide their journals in several sections, one for your course, one for another course, another for private entries. When you collect the journal, collect only that which pertains to your course.
4. Ask students to do short journal writes in class; write with them; and share your writing with the class. Since you don't grade journals, the fact that you write too gives the assignment more value.
5. Every time you ask students to write in class, do something active and deliberate with what they have written:
    - have volunteers read whole entries aloud or
    - have everyone read one sentence to the whole class or
    - have neighbors share one passage with each other.

    In each case, if a student does not like what they have written, they may pass. Sharing the writing like this gives credibility to a non-grades assignment.

6. Count but do not grade student journals. While it's important not to qualitatively evaluate specific journal entries—for here students must be allowed to take risks—good journals should count in some quantitative way:
    - A certain number of points
    - A plus added to a grade
    - As an in-class resource for taking tests

7. Do not write back to every entry; it will burn you out. Instead skim-read journals and write responses to entries that especially concern you.
8. At the end of the term ask students to put in
    - page numbers,
    - a title for each entry,
    - a table of contents, and
    - an evaluative conclusion.

This synthesizing activity asks journal writers to treat these documents seriously and to review what they have written over a whole term of study.

Journal Writing: Six Cognitive Activities in Journal Entries

How do I Use Cognitive Journal Writing?

1. Teach each cognitive level one at a time by reading a page of text and providing an example of a journal entry on a transparency.
2. Then ask students to read a textbook passage or other text and practice the identified cognitive level in their journal.
3. Have students choose a level after a reading assignment or independent reading and create a journal entry.
4. For small collaborative group work, organize groups of six students to a group and have them number off 1-6. Assign the corresponding cognitive level to students; for example, all the one's write an observation entry.
5. Another idea is to use sticky notes and ask students to select one of the levels and write about the content learned in class.

Six Cognitive Activities in Journal Entries

1. **Observations:**
   Observations may involve describing what is actually visible. Observations of text entail summarizing and interpreting details and key ideas. This activity is primary to scientists, who must witness in order to test, as well as to literary scholars, who must read in order to interpret.

2. **Questions**:
   Use journals to formulate and record questions. Questions may be expressions of personal doubt, points of confusion, validity of information, and/or how things are done. It is important to learning that students generate and record their questions, not just answers.

3. **Speculation:**
   Journals give students places to wonder on paper about the meaning of events, issues, facts, readings, patterns, interpretations, problems, and solutions. The journal is the place to try out without fear of penalty; the evidence of the attempt is the value there.

4. **Self Awareness:**
   Journals can help students become conscious of who they are and what they stand for, how and why they differ from others.

5. **Digression:**
   Journal entries can invite the writer to connect seemingly unrelated pieces of thought to the main idea and/or make personal connections inventively. Include writer explanations of the entry.

6. **Synthesis:**
   Asks writers to put ideas together, find relationships, and/or connect one course or topic with one another. Synthesis entries give writers practice making cross text connections.

TWO COLUMN NOTE TAKING

FACTS OR QUOTES	I THINK…

RAFT

RAFT is an acronym for **R**ole/ **A**udience/ **F**ormat/ **T**opic. The RAFT activity allows students to personalize their responses to learning. This technique encourages creative thinking and motivates students to demonstrate understanding in a nontraditional, yet informative, written format. In working with a RAFT assignment, students will NOT be writing for a teacher. The student has a **role** to play and as they think in that role, they have to address a given **audience** using the specific **format** noted on the **topic** given.

RAFT keeps students "afloat" by forcing them to process new information from unique perspectives rather than to just write answers to questions.

For example, a student studying inventions of the twentieth century in social studies class might assume the role of a bird and write a letter to the Wright Brothers complaining that their new invention disrupts the skies. A math student might assume the role of a square root and write a love letter to a whole number explaining the intricacies of their relationship. In health class a student could become a "lung" and write a letter of complaint to cigarettes, listing the negative effects of smoking. Student's hands become the "role" in art class - apologizing to modeling clay why it was so rough while manipulating it.

RAFT activities encourage students to think about what they are learning from another angle and to apply new knowledge in a meaningful context. Although the writing that students do is not a traditional essay, it still requires students to process information and ideas that the teacher wanted them to learn while allowing students to add their personal touches and creativity to their learning.

Students tend to be more motivated to do RAFT writing than other types of assignments because they become personally invested in their role and they are using information rather than just reporting it.

Created by Cindy Bridges, Hopewell City Public Schools

BASIC EXAMPLES TO GET STARTED

ROLE	AUDIENCE	FORMAT	TOPIC
Writer	**Publisher**	**Book Jacket**	**Subject of your novel**
Artist	**Museum Curator**	**CD Cover**	***Topic Studied***
Adventurer	**General Public**	**Travel Brochure**	***Area Explored***
Scientist	**U.S. President**	**Informative Pamphlet**	**West Nile Virus**
Reporter	**Environmental Activists**	**Editorial**	**Stop Complaining**
Lawyer	**Jury**	**Closing Statement**	**Miranda v. Arizona**
Gavel	**Judge**	**Poem**	**Don't be so hard on me**
Animal	**Self**	**Diary Entry**	**Deforestation**

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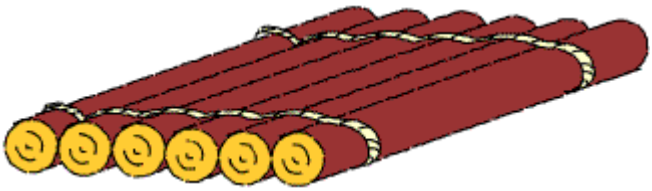

Role

You may take on the role of yourself or another person, or you may take on the role of something inanimate, something that doesn't have life-like qualities.

Perhaps you will use *personification* when you become that inanimate object!

Audience

The audience you are writing for can vary tremendously.

Variation in audience requires a variation in the format and level of language used!

Format

Experiment with a variety of formats. Telegrams, Wanted Posters, Letters, Diary Entries, Obituaries, Epitaphs, Brochures…

Explore the possibilities. Don't restrict yourself to one format!

Topic

Topics need to relate to the role and audience selected.

Make sure your topic fits who you are trying to be and who your audience is.

Created by Cindy Bridges, Hopewell City Public Schools

Math RAFT Examples

Role	Audience	Format	Topic
Square Root	Whole Number	Love Letter	Explain relationship
Fraction	Baker	Directions	To double the recipe
Estimated Sum	Fractions/Mixed numbers	Advice Column	To become well-rounded
Greatest Common Factor	Common Factor	Nursery Rhyme	I'm the greatest!
Equivalent Fractions	Non-Equivalent	Personal Ad	How to find your soul mate
Fraction	Whole Number	Petition	To be considered part of the family
Improper Fraction	Mixed Numbers	Reconciliation Letter	We're more alike than different
A Word Problem	Middle School Students	Song or Poem	How to get to know me
Equation	Another equation	Poem	The beauty of a balanced life
Prime Number	Rational Numbers	Instructions	Rules for divisibility
Parts of a Graph	TV Audience	Script	How to read a graph
Exponent	Jury	Instructions to the Jury	Laws of Exponents
Zero	Whole Numbers	Campaign Speech	Importance of the number zero
Repeating Decimal	Set of Rational Numbers	Petition	Proving you belong to a set

Created by Cindy Bridges, Hopewell City Public Schools

Science RAFT Examples

Role	Audience	Format	Topic
Doctor	F.D.A.	Letter	Approval of a new vaccine
Butterfly	Bug Collector	News Column	Reproduction
Scientist	Charles Darwin	Letter	Refute evolution theory
Rain drop	Ocean	Poem	Explain water cycle
Salmon	Commercial Fisherman	Song	Life Cycle Blues
Nerve Cell	The Brain	Rap	Demand that the brain listen to your pain
Zygote	Friends	Travelogue	Describe your journey from one cell to a multicellular organism
DNA molecule	mRNA	Commercial	Entice messenger RNA to help you transcribe and translate
Water drop	Other water drops	Travel Guide	Journey through the water cycle
Bean	Self	Diary	Process of germination
Limestone Rock	Cave visitors	Postcard	Chemical weathering process
Statue of Liberty	Dear Abbey Readers	Advice Column	Effect of Acid Rain
Trout	Farmers	Letter	Effect of fertilizer runoff
Red Blood Cell	Lungs	Thank You Note	Journey through the circulatory system

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Chapter 6

Fluency

GUIDED READ ALOUD: USING THE MAGNIFICENT SEVEN

Set Purposes for Reading • Title: • Author: • "The title makes me think that his is going to be about…"	**Make Connections (to self, other text, world)** • "This reminds me of…"
Ask Questions • "What questions do you have about this selection?"	**Making Inferences** • "How does [name of character] feel in the beginning of the story?" • "How does [name of another character] feel?"
Visualize • "Draw one scene from the story and label it."	**Determining Importance** • "What is the most important idea on this page?"
Synthesize • What overall theme or meaning do you think would connect all the ideas in this book? • If you were to tell another person about the text in a few sentences, what would you tell them?	**Use Fix-up Strategies to Address Confusion and Repair Comprehension.** • "When you came to a part you couldn't understand, what strategies did you use?"

Picture Book List
Narnia Bookstore, Richmond, Virginia

Big Blue Whale by Nicola Davies	$6.99
Encounter by Jane Yolen	$6.00
Fortune Tellers by Lloyd Alexander	$6.99
From Slave Ship to Freedom by Julius Lester	$6.99
Garden of Abul Gasazi; by Chris Van Allsburg	$18.95 (hardback only)
Going Home by Eve Bunting	$6.99
Grandfather's Journey by Alan Say	$16.95 (hardback only)
Hiroshima No Pika by Toshi Maruki	$17.99 (hardback only)
Letting Swift River Go by Jane Yolen	$6.99
The Librarian Who Measured the Earth by Kathryn Lasky	$17.99 (hardback only)
Rose Blanche by Ian McEwan and Roberto Innocenti is out of print	
She's Wearing a Dead Bird on Her Head by Kathryn Lasky	$6.99
Tale of the Mandarin Ducks; Katherine Paterson	$6.99
Terrible Things: An Allegory of the Holocaust by Eve Bunting	$12.95 (hardback only)
Through Grandpa's Eyes by Patricia MacLachlan	$6.99
The Wall by Eve Bunting	$5.95

Picture Book List for Middle School Math

Greedy Triangle by Marilyn Burns	$16.95
If You Hopped Like a Frog by David Schwartz	$16.95
A Cloak for the Dreamer by Aileen Friedman	$16.95
Anno's Magic Seeds by Anno	$8.99

Sir Circumference and the Dragon of Pi
by Cindy Neushwander $16.95

Math Curse by Jon Scieszka $17.99

One Grain of Rice by Demi $19.95

Social Studies Picture Books for Middle School

The Bracelet by Yoshiko Uchida $6.99

The Drinking Gourd by F.M. Monjo $3.99

Pink and Say by Patricia Polacco $16.99

Sleds on Boston Common by Louise Borden $17.00

Keeping Quilt by Patricia Polacco $17.99

Dreaming of America by Eve Bunting Out of print

The Dust Bowl by David Booth $16.95

Molly Bannaky by Alice McGill $17.00

The Wall by Eve Bunting $5.95

Vote by Eileen Christelow $5.95

Can't You Make Them Behave? Jean Fritz $6.99

Katie's Trunk by Ann Turner $6.99

My Senator and Me: A Dog's Eye View of Washington D.C.
by Edward Kennedy $16.99

A Good Night for Freedom by Barbara Morrow $16.95

Science Picture Books for Middle Grades

And Still the Turtle Watched by Sheila MacGill-Callahan (illustrated by Barry Moser) paperback; Environment-Native American

Built to Last-Building America's Amazing Bridges, Dams Tunnels and Skyscrapers by George Sullivan, hardback: Engineering and architecture

Drop of Water by Walter Wick hardback
Story of water in its many forms

Hot Air; The (Mostly) True Story of the First Hot-Air Balloon Ride by Marjorie Priceman; Properties of gas

June 29, 1999 by David Wiesner paperback
Science Fair project gone wild

Just a Dream by Chris Van Allsburg hardback
story of the environment-recycling etc.

Looking at Glass Through the Ages by Bruce Koscielniak
solid matter to liquid forms to solid matter

Mistakes That Worked by Charlotte Jones and John Obrien
Inventions

Now and Ben by Gene Baretta; hardback
Benjamin Franklin and his inventions

Plantzilla by Jerdine Nolen (illustrated by David Catrow) paperback
science project-plants

Pop's Bridge by Eve Bunting (illustrated by C.F. Payne) hardback
building the Golden Gate Bridge

Science Verse by Jon Scieszka (illustrated by Lane Smith) hardback
Comes with CD-parodies of songs which explain science

Sector 7 by David Wiesner; paperback
Environment

Story of Clocks and Calendars by Betsy Maestro (illustrated by Giulio Maestro) paperback
Includes discussion of archeology, clock mechanisms etc.

Subway for New York by David Weitaman; hardback; Engineering and archectecture

Starry Messenger Story of Galileo by Peter Sis, paperback

The Water Hole by Graeme Base paperback
environment

Weslandia by Paul Fleischman (illustrated by Kevin Hawkes) paperback
"civilization" in a garden (science project)

READERS' THEATRE

What is Reader's Theatre?

Reader's Theatre is a way to make books come alive for students of all ages. Very simply, a book is rewritten into a script that involves active dialogue between several characters.

Reader's Theatre involves children in oral reading through reading parts in scripts. It has been found to be particularly effective in building reading *fluency*. It can also boost listening and speaking skills, enhance confidence, and transform reluctant readers into book lovers.

While Reader's Theatre has lots of power on its own, the power is greatly increased when kids prepare their own scripts – they are truly integrating reading, writing, and thinking skills. In the experience of breaking down a story to turn it into a simple script, students learn about fundamental aspects of literature, such as character, plot, setting, and structure.

Any story can be transformed into a theatrical performance, but some are easier to work with than others. In general, look for stories that are simple and lively, with lots of dialogue or action, and with not too many scenes or characters.

Reader's Theatre is a simple, effective, and risk-free way to get children to enjoy reading.

Preparing for Performance

Instructions for students:

- Highlights your speeches in your copy of the script. Mark only words that you will speak.
- Underline words that tell you anything that you will need to act out.
- Read through your part silently. If there are words that you are unsure of, ask the teacher or a fellow student.
- Read through your part out loud. If you are a character, think about how that character would sound. Should you try a funny voice? How would the character feel about what's happening in the story? Can you speak as if you were feeling that? Try out

faces and actions. Would your character stand or move in a special way? Can you do that?

Performance

- Hold your script at a steady height but do not hide your face.
- While you speak, try to look up often.
- Talk slowly. Speak each syllable clearly.
- Talk with feeling.
- Stand and/or sit straight. Keep your hands and feet still, if they are doing nothing useful.
- Characters – remember to BE your character even when you are not speaking.
- Narrators, make sure you give the characters enough time for their actions.

Created by Cindy Bridges, Hopewell City Public Schools

NOTES:

READERS' THEATER PRESENTATION RUBRIC

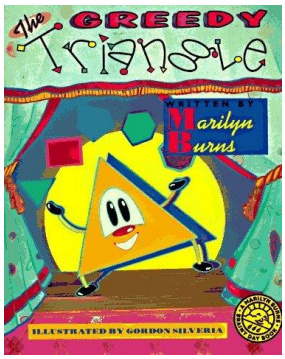
Name: _____
Date: _____

	Excellent	Good	Needs work
Oral Delivery *Volume*	Consistently speaks loudly enough for audience to hear *8-10 pts.*	Usually speaks loudly enough for audience to hear *4-7 pts.*	Speaks too soft or loud to hear. *0-3 pts.*
Oral Delivery *Clarity*	Words are pronounced correctly and easily understood *8-10 pts.*	Most words are pronounced correctly and easily understood *4-7 pts.*	Many words pronounced incorrectly, too fast or slow, mumbles *0-3 pts.*
Oral Delivery *Reads with expression*	Consistently reads with appropriate expression *8-10 pts.*	Usually reads with appropriate expression *4-7 pts.*	Reads with little or no expression *0-3 pts.*
Oral Delivery *Reads in turn*	Takes turns accurately on a consistent basis *8-10 pts.*	Takes turns accurately on a somewhat consistent basis *4-7 pts.*	Takes turns rarely on a consistent basis *0-3 pts.*
Cooperation with group	Consistently works well with others *8-10 pts.*	Sometimes work well with others *4-7 pts.*	Difficulty in working with others *0-3 pts.*

Comments:
_____
_____
_____

Total points possible: 40
Points earned: _____
Percentage: _____ %

Created by Cindy Bridges, Hopewell City Public Schools



The Greedy Triangle

By Marilyn Burns

Characters:

Narrator 1, Narrator 2, Narrator 3, Narrator 4, Narrator 5, Narrator 6, Triangle, Shapeshifter

****

Narrator 1: Once there was a triangle that was – as most triangles are – always busy.

Narrator 2: The triangle spent its time holding up roofs,

Narrator 3: supporting bridges,

Narrator 4: making music in a symphony orchestra,

Narrator 5: catching the wind for sailboats,

Narrator 1: being slices of pie and halves of sandwiches,

Narrator 2: and much, much more.

Narrator 3: The triangle's favorite thing, however, was to slip into place when people put their hands on their hips.

Triangle: That way I always here the latest news which I can tell my friends,

Narrator 4: it said.

Narrator 5: The triangle's friends liked hearing the news.

Narrator 6: One day the triangle began to feel dissatisfied.

Triangle: I'm tired of doing the same old things. There must be more to life,

Narrator 1: it grumbled.

Narrator 2: So the triangle went to see the local shapeshifter.

Shapeshifter: How may I help you?

Narrator 3: the shapeshifter asked the triangle.

Triangle: I think is had just one more side and one more angle my life would be more interesting,

Narrator 4: said the triangle.

Shapeshifter: That's easy to do,

Narrator 5: said the shapeshifter.

Narrator 6: Poof! The shapeshifter turned the triangle into a quadrilateral.

Narrator 1: Life changed in a wonderful way.

Narrator 2: The quadrilateral was happy with all the new things it could do.

Narrator 3: The quadrilateral could be a baseball diamond, or first, second, or third base.

Narrator 4: It could take a position on a checkerboard or chess board.

Narrator 5: It could be a television screen
a computer screen
or a movie screen

Narrator 6: It could frame windows or frame pictures

Narrator 1: and much, much more.

Narrator 2: The quadrilateral's favorite thing, however, was to be the pages of a book.

Triangle: I learn so many interesting stories that way – which I can tell my friends,

Narrator 3: it said.

Narrator 4: The quadrilateral's friends liked hearing the stories.

Narrator 5: But one day the quadrilateral began to feel dissatisfied.

Triangle: I'm tired of doing the same old things,

Narrator 6: it grumbled.

Triangle: There must be more to life,

Narrator 1: it proclaimed.

Narrator 2: So the quadrilateral went back to the shapeshifter.

Shapeshifter: How may I help you now?

Narrator 3: the shapeshifter asked the quadrilateral.

Triangle: I think if I had just one more side and one more angle my life would be more interesting,

Narrator 4: whined the triangle.

Narrator 5: Poof! The shapeshifter turned the quadrilateral into a pentagon.

Narrator 6: Life changed in a wonderful way.

Narrator 1: The pentagon was happy with all the new things it could do.

Narrator 2: On a baseball diamond, the pentagon could be home plate.

Narrator 3: it could be a section on a soccer ball,

Narrator 4: or appear inside whenever someone drew a five-pointed star.

Narrator 5: The pentagon's favorite thing, however, was to be the headquarters of the United States military near Washington D.C.

Triangle: I hear all the top things that way. It's too bad I can't tell them to my friends,

Narrator 6: it bemoaned.

Narrator 1: The pentagon's friends couldn't help feeling left out.

Narrator 2: After a while time seemed to pass slowly for the pentagon and it became dissatisfied.

Triangle: I'm tired of doing the same old things. There must be more to life,

Narrator 3: it cried.

Narrator 4: So the pentagon went back to the shapeshifter.

Shapeshifter: So you're here again. Now what would you like?

Narrator 5: the shapeshifter said to the pentagon.

Triangle: I think if I had just one more side and one more angle my life would be more interesting,

Narrator 6: said the triangle.

Shapeshifter: That's easy to do,

Narrator 1: exclaimed the shapeshifter.

Narrator 2: Poof! The shapeshifter turned the pentagon into a hexagon.

Narrator 3: Life changed in a wonderful way. The hexagon was happy with all the new things it could do.

Narrator 4: The hexagon fit in as floor tiles in houses and patios and fancy crackers at parties and picnics.

Narrator 5: It worked as the socket of certain bolts and the prongs of certain wrenches.

Narrator 6: The hexagon's favorite thing, however, was to be a cell in a beehive.

Triangle: I love watching the bees as the buzz in and out,

Narrator 1: it declared.

Narrator 2: The hexagon spent so much time in the beehive, it was too busy to talk to its friends.

Narrator 3: The friends missed the hexagon and couldn't help feeling ignored.

Narrator 4: Again and again, the shape became restless, dissatisfied, and unhappy with its life.

Narrator 5: Again and again, it returned to the shapeshifter for more sides and more angles.

Narrator 1: The shapeshifter agreed to turn it into one shape after another:

Narrator 2: A heptagon,

Narrator 3: an octagon,

Narrator 4: a nonagon,

Narrator 5: a decagon,

Narrator 6: and on and on.

Narrator 1: Finally, the shape had many, many sides and many, many angles.

Narrator 2: Its sides were so small that it had trouble keeping its balance.

Narrator 3: Its friends couldn't tell which side it was on and began to avoid the shape.

Narrator 4: One day, when the shape was going down a hill, it began to roll.

Narrator 5: Faster and faster it went,

Narrator 6: screeching around corners,

Narrator 1: crashing into fences and trees,

Narrator 2: colliding with bicycles,

Narrator 3: and terrifying walkers.

Narrator 4: At last, the shape came to a stop.

Narrator 5: It felt tired and dizzy, lonely, and sad.

Triangle: Enough,

Narrator 6: thought the shape.

Triangle: I don't know which side is up. I can't keep my balance. My friends don't want me around,

Narrator 1: it complained.

Narrator 2: The shape could no longer remember why it had been so unhappy as a triangle.

Narrator 3: Very carefully it made its way back to the shapeshifter.

Shapeshifter: Aren't you happy yet?

Narrator 4: the shapeshifter asked.

Triangle: I want to be a triangle again,

Narrator 5: said the shape.

Shapeshifter: I'm not surprised,

Narrator 6: exclaimed the shapeshifter.

Narrator 1: Poof! The shapeshifter turned the shape back into a triangle.

Narrator 2: The shapeshifter was delighted to have its old shape back again and kept itself very busy.

Narrator 3: Once again, it held up roofs,

Narrator 4: supported bridges,

Narrator 5: made music in a symphony orchestra,

Narrator 6: caught the wind for sailboats,

Narrator 1: became slices of pie and halves of sandwiches,

Narrator 2: and much, much more.

Narrator 3: Still, the triangle's favorite thing was to slip into place when people put their hands on their hips.

Triangle: That way I always hear the latest new – which I can tell my friends,

Narrator 4: it said.

Narrator 5: Its friends liked hearing the news and were glad the triangle was back in shape again.

The Great Kapok Tree

By: Lynne Cherry

14 PARTS	**PARTS**
Narrator	The Man
Monkey	Boa
2 Butterflies	Toucan
Frog	Jaguar
2 Porcupines	Anteater
Sloth	Boy

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Narrator: One man was walking into the rain forest. Moments before, the forest had been alive with the sounds of squawking birds and howling monkeys. Now all was quiet as the creatures watched the man and wondered why he had come. The man stopped and pointed to a great Kapok tree. Then he took the ax he carried and struck the trunk of the tree.

The man: Whack! Whack! Whack!

Narrator: The sounds of the blows rang through the forest. The wood of the tree was very hard.

The man: Chop! Chop! Chop!

Narrator: The man wiped off the sweat that ran down his face and neck.

The man: Whack! Chop! Whack! Chop!

Narrator: Soon the man grew tired. He sat down to rest at the foot of the great Kapok tree. Before he knew it, the heat and hum of the forest had lulled him to sleep. A boa constrictor lived in the Kapok tree. He slithered down its trunk to where the man was sleeping. He looked at the gash the ax had made in the tree. Then the huge snake slid very close to the man and hissed in his ear.

Boa: Senor, this tree is a tree of miracles. It is my home, where generations of my ancestors have lived. Do not chop it down.

Narrator: A butterfly flew near the sleeping man[1]s ear

Butterflies: Senor, our home is in this Kapok tree, and we fly from tree to tree and flower to flower collecting pollen. In this way we pollinate the trees and flowers throughout the rain forest. You see, all living things depend on one another.

Narrator: A troupe of monkeys scampered down from the canopy of the Kapok tree. They chattered to the sleeping man.

Monkey: Senor, we have seen the ways of man. You chop down one tree, then come back for another and another. The roots of these great trees will wither and die, and there will be nothing left to hold the earth in place. When the heavy rains come, the soil will be washed away and the forest will become a desert.

Narrator: A toucan flew down from the canopy.

Toucan: Senor! You must not cut down this tree. We have flown over the rain forest and seen what happens once you begin to chop down the trees. Many people settle on the land. They set fire to clear the underbrush, and soon the forest disappears. Where once there was life and beauty only black and smoldering ruins remain.

Narrator: Some bright and small tree frogs crawled along the edge of a leaf. In squeaky voices they piped in the man's ear.

Frog: Senor, a ruined rain forest means ruined lives . . .many ruined lives. You will leave many of us homeless if you chop down this great Kapok tree.

Narrator: A jaguar had been sleeping along a branch in the middle of the tree. Because his spotted coat blended into the dappled light and shadows of the understory, no one had noticed him. Now he leapt down and padded silently over to the sleeping man. He growled in his ear.

Jaguar: Senor, the Kapok tree is home to many birds and animals. If you cut it down, where will I find my dinner?

Narrator: Two tree porcupines swung down from branch to branch and whispered to the man.

Porcupines: Senor, do you know what we animals and humans need in order to live? Oxygen. And, Senor, do you know what trees produce? Oxygen! If you cut down the forests you will destroy that which gives us all life.

Narrator: An anteater climbed down the Kapok tree with her baby clinging to her back. The unstriped anteater said to the sleeping man.

Anteater: Senor, you are chopping down this tree with no thought for the future. And surely you know that what happens tomorrow depends upon what you do today. The big man tells you to chop down a beautiful tree. He does not think of his own children, who tomorrow must live in a world without trees.

Narrator: A three-toed sloth had begun climbing down from the canopy when the men first appeared. Only now did she reach the ground. Plodding ever so slowly over to the sleeping man, she spoke in her deep and lazy voice.

Sloth: Senor, how much is beauty worth? Can you live without it? If you destroy the beauty of the rain forest, on what would you feast your eyes?

Narrator: A child from the Yanomamo tribe who lived in the rain forest knelt over the sleeping man. He murmured in his ear.

Boy: Senor, when you awake, please look upon us all with new eyes.

Narrator: The man awoke with a start. Before him stood the rain forest child, and all around him, staring, were the creatures who depended upon the great Kapok tree. What wondrous and rare animals they were! The man looked about and saw the sun jewels amidst the dark green forest. Strange and beautiful plants seemed to dangle in the air, suspended from the great Kapok tree. The man smelled the fragrant perfume of their flowers. He felt the steamy mist rising from the forest floor. But he heard no sound, for the creatures were strangely silent. The man stood and picked up his ax. He swung back his arm as though to strike the tree. Suddenly he stopped. He turned and looked at the animals and the child. He hesitated. Then he dropped the ax and walked out of the rain forest.

Chapter 7

Assessment

Classroom Literacy Assessments

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What is the purpose?

To obtain a snapshot of literacy development within a particular content area for the purpose of considering the types of instruction and materials necessary to meet individual needs and to make the most of reading and writing to learn.

What kinds of information will be gathered?

Assessment	What information it provides
Content-specific reading/writing questionnaire	Reading and writing experiences that students prefer Materials and instruction that have helped students learn in the past
Oral reading record in a content area grade level passage	A first look at which students might have trouble accessing grade-level materials due to difficulty at the word level
Content summary	General notion of which students comprehended content information from a grade level passage
Writing sample	A first look at writing fluency and knowledge about the conventions of writing

How will we gather this information?

This information will be collected within the context of a lesson, and ideally, in a lesson connected to the current unit of study within each classroom. The reading/writing questionnaire may be administered at any time prior to the lesson. The remainder of the plan is intended to be completed in one or two class sessions. The procedures will be as follows:

1. Teacher selects a grade level text (can be textbook) that includes a useful passage on the particular topic. The reading of this text will be the basis for collecting a) the oral reading record; b) the content summary; and c) the writing sample.
2. Teacher begins the lesson with a prereading activity to prepare students for the new information in the text. Next, the teacher will read aloud the first portion of the text to students.
3. WRITING SAMPLE: After the brief teacher read aloud from the text, students will be asked to write on some prompt that is conceptually related to the topic at hand. For instance, for a topic in science class such as the spread of viruses, have students write about a time they served as host to someone or when someone served as host to them. Students would later read about the importance of the host to a virus. If possible, prepare more than one prompt

from which students can choose. For example, another prompt that fits with the virus theme is to ask students about a time they contracted a virus. The key is to have students write about something they already know rather than precisely about the topic itself if it is unfamiliar.

4. ORAL READING RECORD: As students write, the teacher will sit individually with one student at a time and ask them to read aloud the next section of text. As the student reads, the teacher will record the number of errors for the first 100 words to obtain an idea about percentage of accuracy. For efficiency and record keeping, teachers should prepare by making copies of the passage designated for oral reading equal to the number of students in the class (i.e., for marking words the student mispronounces, omits, or does not attempt).
5. After all students have completed a private oral reading, and writing samples have been collected, the teacher will then finished the remainder of the text by reading it aloud to students.
6. CONTENT SUMMARY: Students will then be asked to write a summary of what they learned in the lesson.

Sample conceptually-oriented writing prompts:

Text/Summary	Prompt(s)
Hakim, J. (1994). Liberty for all? (A History of Us). New York: Oxford University Press. Ch. 20: "She Wishes to Ornament Their Minds." *Deals with first public schools in America, and in particular, the education of girls.*	•What if you never went to school? Write about something you have learned outside of school. •Write about the best thing you have learned in school.
Banks, M. (1999). How monkeys "talk." New York: Benchmark. *Deals with how primates communicate (e.g., facial expressions, vocal sounds, scents, body language)*	•Did you ever react to something that someone said or did, but without using words? Write about that experience. •What if you could not talk or write? How would you communicate with other people?

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Miscues that count as errors in oral reading:
Omissions/No Attempt
Substitutions
Inversions
Insertions

Reading behaviors noted, but not counted as errors:
Hesitations
Repetitions
Self-corrections

Reading and Writing Questionnaire

•If you could read anything, what would it be? Why?

•What makes you want to read in (name of subject area)?

•Write about a good experience you had with reading in (name of subject).

•Write about a bad experience you had with reading in (name of subject).

•Write about a good experience you had with writing in (name of subject).

•Write about a bad experience you had with writing in (name of subject).

•What kinds of reading do you do outside of school?

•What have teachers done that helps you the most with reading?

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Classroom Assessment Summary

Grade Level:

Passage Used:

Writing Prompt(s):

Student	Oral Reading Accuracy (%)	Content Summary	Writing Sample	Survey

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Student	Oral Reading Accuracy (%)	Content Summary	Writing Sample	Survey

Student	Oral Reading Accuracy (%)	Content Summary	Writing Sample	Survey

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Overall Trends

Oral Reading	
Comprehension	
Writing	
Attitudes/Preferences/Experiences	

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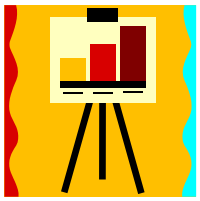


DATA WALLS

What Are Data Walls?

- Data walls are an interesting interactive way for teachers to learn about their students and for students to learn about one another. It is a way to start a learning community and to recognize how the class, as a group, is thinking and growing.
- Data Walls offer a way to gather performance data on students and classes over time.
- Data Walls illustrate both individual and group data.
- They consist of prompts that are intended to make students' thinking public and to monitor progress and development.

Why Use Data Walls?

- Data Walls afford students the opportunity to see how their classmates are thinking and how they respond to prompts.
- They are an easy form of assessment to administer.
- Teachers can quickly see who's "got it" and who needs more instructional practice.
- Classroom formative assessment is a powerful means to improve student learning, especially for low-achieving students (Black and William, 1998).
- Feedback informs learners of gaps between desired goals and current knowledge, understanding, or skill and helps them to obtain goals. (Ramaprasad, 1983; Sadler, 1989).
- Formative assessment supports the expectation that all children can learn to high levels (Ames, 1992; Vispoel & Austin, 1995).

How Do I Construct a Data Wall?

- Data walls are made from chart paper, poster board, or just vacant space on a white/chalkboard.
- The data can be a color-coded tab, a written dialogue, a constructed response, an explanation, a sample of work, or a place on a continuum.
- Students can use post-it notes to record responses. By putting a student number on the note, they can be removed by the teacher and put into a student file to keep for individual data. Secondary teachers can use color-coded sticky notes for different classes.

How Do I Use Data Walls?

The following techniques and strategies represent a few examples of assessment ideas that could become Data Walls.

1. FRAYER'S MODEL: Use the Frayer's Model framework as a response board. The topic is posted in the center of the square and students place their response in the appropriate box. See Chapter Four for a description of the Frayer Model.

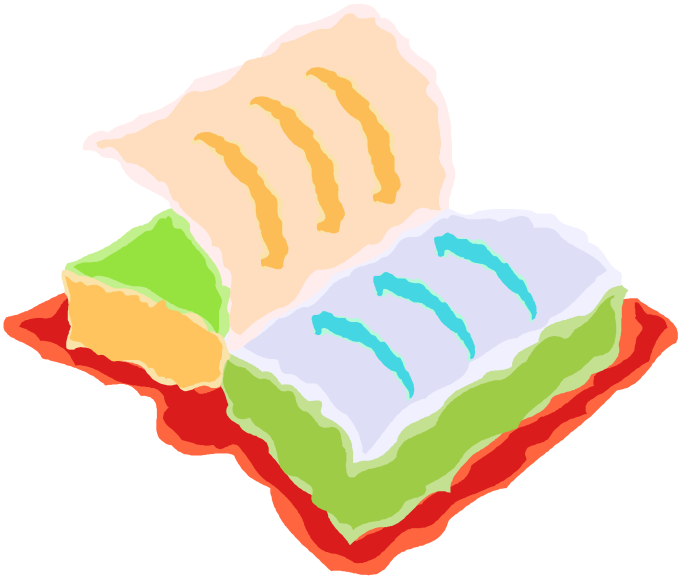
2. LEARNING STYLES: This assessment gathers information on student's perception of their individual learning styles. After students have identified their learning style, create a bar graph showing the frequencies of each style and discuss the results. See Chapter Two for this assessment.

3. DIALOGUE BOARDS: This assessment focuses on students interacting to the prompt and/or each other. It is used:
    - As an ongoing data gathering activity (such as responding to "What Genres of Literature have you read this year?")
    - To activate prior knowledge and experiences
    - For dialogue between students based on opinion statements
    - As a reflection on learning
    - To assess what students already know about a topic
    - To make a connection to the unit theme or chapter topic

    Adapted from Macomb Regional Literacy Training Center, 2003

Chapter 8

Professional Literature

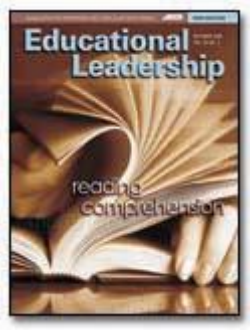


Anticipation Guide
For
Stacking the Deck for Literacy Learning

Read each one of the following statements and write whether you agree or disagree with each one.

Before Reading		Statement	After Reading	
Agree	Disagree	1. *Middle schools offer the perfect opportunity to incorporate guided reading groups into instruction.*	Agree	Disagree
Why?			Why?	
Agree	Disagree	2. *When teachers know how to model and support literacy in their subject areas, they create an environment conducive to helping students achieve fluency.*	Agree	Disagree
Why?			Why?	
Agree	Disagree	3. *Most adolescents come to middle school with an understanding of essential aspects of literacy.*	Agree	Disagree
Why?			Why?	
Agree	Disagree	4. *Responsibility for literacy tasks should shift from the teacher to a shared responsibility to student independence.*	Agree	Disagree
Why?			Why?	

Educational Leadership



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Learning From What Doesn't Work

NOTES

Gay Ivey and Douglas Fisher

Older students can read with enthusiasm and understanding, especially when teachers avoid ineffective practices that promote disengagement.

Educators are flooding the professional learning community with requests for strategies that work to improve reading comprehension in the upper-elementary and secondary grades. In these achievement-driven times, we want to know what works best to raise test scores, improve comprehension, and motivate students to read. The answers are not simple for most students, particularly for older students still learning about literacy. The needs of adolescent readers are complex and varied (Ivey, 1999), even within specific cultural groups (Alvermann, 2001) and linguistic groups (Rubinstein-Avila, 2003–2004). To make blanket assertions about what works for *all* students would be misguided and shortsighted.

Getting to the bottom of older readers' comprehension and motivation difficulties requires careful, ongoing assessment of instructional practices and students' literacy needs. We believe, like Guthrie and Wigfield (1997), that real engagement in reading is not the product of strategies alone but a fusion of self-efficacy, interest, and strategic knowledge.

What we can report with more certainty are common practices that create barriers to engaged reading and comprehension development. We invite you to consider five ineffective strategies for developing reading comprehension in older students. Before asking "What works?", it might help to ask "What *doesn't* work?"

Ineffective Strategy 1: Don't let students read.

A new high school principal "put an end to reading" and gave back to teachers time formerly used for Sustained Silent Reading. He warned teachers that students should be "focused on the instruction at hand" rather than "sitting around reading" during class time. In a discussion about these policy changes, the principal explained, "Students have to be taught. We need more time focused on direct instruction."

During the next two years, book circulation rates at the high school library plummeted, and the school's overall achievement on the content standards tests declined. Teachers understood why taking away students' time to "just read" might have resulted in a decline in reading scores, but they were shocked that scores sagged in history and science as well.

Compare this with the approach of principal Doug Williams, a former math teacher. He announced to the faculty of Hoover High School, "If we are going to teach our students to read, we need to provide them with *opportunities* to read." He allocated 20 minutes each day for Sustained Silent Reading and provided his staff with the resources and professional development necessary to ensure that students had time to read books of their choice (Fisher, 2004).

The result? Hoover has met state accountability targets, and students' average reading level as measured by the Gates-MacGinitie Reading Test has risen from 4.3 to

7.2. Although the independent reading initiative cannot take full credit for this, Hoover teachers credit the Sustained Silent Reading time with a significant portion of the increased achievement.

In addition to such schoolwide approaches as a formal Sustained Silent Reading period (Pilgreen, 2000), providing students with time for independent reading during content-area classes increases their motivation, background knowledge, and vocabulary. In fact, students report that having time to read actually affords them the opportunity to think and comprehend (Ivey & Broaddus, 2001). Consequently, we cannot imagine initiatives designed to improve comprehension that do not prioritize time with text. Although some have suggested that providing students with practice does not improve their reading (Shanahan, 2004), we cannot think of a single case in which a poor reader became a better reader without having substantial opportunities to read. How many years of piano, tennis, or driving practice do we need to excel at those skills?

We often hear the argument that we should focus on the basic skills, even in high school, before using valuable instructional time to let students read. We know of programs for struggling readers that emphasize word-level reading skills for several years to the exclusion of real reading. This kind of instruction certainly helps students read words more accurately, but it doesn't necessarily equate to improved reading comprehension, nor does it increase student motivation to read. Students need instruction, but mostly they need opportunities to negotiate real texts for real purposes. For example, 7th grader Manuel struggled to read materials above the 2nd grade level, but he became more skilled and motivated to read when his teacher found easy books for him to read and Web sites for him to peruse on platypuses and leopards, two animals that had piqued his interest in science class.

Ineffective Strategy 2: Make students read what they don't know about and don't care about.

Insisting that every student needs to read enduring works of literature, Ms. Prewitt distributes a copy of *Things Fall Apart* (Achebe, 1958) to each of her students, along with a packet that requires the students to summarize each chapter, identify the characters, and respond to specific prompts.

With no background knowledge and little interest in the book, students read one chapter each night for homework. They complete the assigned section of the packet before discussing the chapter in class. The book takes several weeks to complete; students rush to catch up on the packet work on the final day. One student uses *CliffsNotes* to hurriedly complete his packet; another student copies from a peer. When asked about the book, Anthony admits, "I don't know what it was about, really. All we had to do was this" (he shows the packet). When asked, "Did you make any connections between this book and your own life?", Anthony confesses, "I barely read it. I just searched for the answers. Man, it's not like I need to know this."

Alternatively, Mr. Jackson, a history teacher, was discussing the Reformation with his students. Each student had selected a book from a wide range of texts on the topic and appeared interested in the subject at hand. When asked how he engaged his students, Mr. Jackson replied,

> You build on what they know *and* on what they care about. You also give them books to choose from so they can extend what they know.

Observing this classroom at work revealed a number of practices ensuring that students comprehended the content. First, Mr. Jackson used a wide range of texts and media to inundate students with intriguing information about the topic, drawing also from contemporary issues that would help students see connections between history and events currently happening in their world and in their personal lives. As students worked on generating questions for a game simulation, they reviewed their individual

readings from the textbook and several trade books as well as their notes from class lectures, discussions, and a video that they had watched.

One page of Daveen's notes focused on the role of the Pope. Daveen's conversation with us confirmed his interest in and comprehension of the subject. After Daveen explained to us the role of the Catholic Church during the Reformation and the process of selecting a Pope, we asked whether he realized that the Pope had just died. "Yeah," he said. "I watched it on TV. I'm not Catholic, but it was cool to see history being repeated." When asked whether he planned to watch the Pope's funeral on television the next day, Daveen grinned and said, "Oh yeah, I'll watch it. You know, Elvis holds that record [for the biggest funeral in history]. I hope the Pope doesn't beat out the King."

Students *can* find curriculum-based topics interesting, and they *can* comprehend what they read in school. Unfortunately, we do not always use texts and methods that highlight what is interesting about the subjects that we teach. Think about how much more compelling students would find a study of genetics, for example, if we used trade books to connect the topic to the fascinating details of solving crimes (*Silent Witness*, Ferllini, 2002) or of multiple births (*Twin Tales: The Magic and Mystery of Multiple Birth*, Jackson, 2001).

Teachers generally ask students to read about a topic before they actually know enough about it to become interested. As adults, we rarely choose to read about unfamiliar topics, and we find it difficult to pay attention when we need to do so. But think about how your inclination to read increases when new information piques your interest. Take the phenomenon of the tsunami, for instance. Before late 2004, would you have been inclined to read about this natural disaster on your own? After the devastating tsunami in Asia, however, perhaps your sympathy for the many victims or your concern about a recurrence caused you to seek out more information on the subject.

We are not saying that students shouldn't read the great, enduring works of literature, nor that they should read only adolescent fiction. We are simply wondering whether a whole class needs to read the same book at the same time and whether this practice tends to produce engaged, interested students who are extending their knowledge.

Teachers who understand their students' backgrounds, prior knowledge, interests, and motivations are much more likely to make the connections that adolescents crave. Although volumes have been written on the importance of and strategies for building background knowledge (Marzano, 2004), good teachers understand that making their content relevant also matters. Studies further suggest that we must provide students with opportunities to draw from what they already know—popular culture and media, for example—so they can more easily learn new information (Goodson & Norton-Meier, 2003).

Ineffective Strategy 3: Make students read difficult books.

Four students of various reading levels sit in a cluster to read together Camus' *The Guest* from their 12th grade literature anthology. Three of these students take turns reading; one follows along. When they reach predetermined places in the story, they stop to take stock of their understanding using the guidelines set forth in a popular strategy known as *reciprocal teaching* (Palincsar & Brown, 1984), in which students (1) summarize the section, (2) clarify confusing parts, (3) ask questions, and (4) predict what will come next.

Each student takes responsibility for one part of the process. The three students who volunteered for the oral reading fulfill their roles productively in the intermittent discussions. This strategy appears to help these students make sense of what they read as they move through the text. The fourth student, who is designated as the

person to ask a clarification question, seems timid and confused when it is her turn to talk.

When she is finally convinced to take a turn reading aloud, it is clear that the text is far beyond her comfort level. In a paragraph of roughly 150 words, she misreads *mused, circumstances, alliance, fraternized, fatigue, essential*, and *musings*, and she takes a substantial amount of time to figure out *fluttered, presence, imposing, ancient, community, armor*, and *heavier*. Even with such solid scaffolding as reciprocal teaching, the difficulty of this text makes comprehension too much of a challenge for this student.

Like this high school senior, 7th grader Renee is part of the 25 percent of students in her school who are reading below grade level and failing to achieve passing scores on the state achievement test. However, Renee's social studies teacher knows that she cannot learn from books that are too difficult for her (Allington, 2002). Instead of assigning one book for the whole class to read during a study of westward expansion in the United States during the mid-1800s, he provides reading choices. A week or so into the unit and after reading aloud from *The Perilous Journey of the Donner Party* (Calabro, 1999), *Hurry Freedom: African Americans in Gold Rush California* (Stanley, 2000), and several other complex but compelling books, he invites Renee and her classmates to select a text from more than 50 different books related to the topic, which vary in genre and level of difficulty. Renee, who has an identified learning disability, and two of her friends who are English language learners select *Kit Carson: A Life of Adventure* (Mercati, 2000), which they read nearly effortlessly on their own. Afterward, they create a fact poster to share with their classmates who have been learning from a host of other books on westward expansion. Renee, who sits in other classes seemingly confused during whole-class readings of difficult texts, has learned so much from this accessible book that she must use the flip side of the poster board to include everything she now has to say.

If we want students to comprehend what they read, we must begin by letting them experience texts that make sense to them. Unfortunately, we hear of school districts that have declared that to get students reading at grade level, all students must practice reading in grade-level texts exclusively: "The test is written at an 8th grade level, so students have to learn how to read 8th grade passages!" We know of no student who got better at reading by reading books that were too difficult for him, and we know of no student reading at a 4th grade level who learned to read at an 8th grade level by reading only 8th grade-level books.

Ineffective Strategy 4: Interrogate students about what they read.

An 8th grade English teacher begins class with the proclamation. "Today, we are focusing on comprehension." Any observer can see that this is indeed the intention because one of the state curriculum standards dealing with comprehension is written prominently on the chalkboard. "You need to know how to comprehend what you read on the state test coming up in April," the teacher explains. With no further discussion, she asks for a volunteer to begin reading aloud from *I Had Seen Castles* (Rylant, 1993).

Some students follow along as their classmate reads, while others stare out the window, work on assignments for other classes, or whisper to a neighboring student. After several paragraphs, the teacher interrupts: "Can somebody explain what is happening so far?" After three students fail to adequately summarize the story, the teacher throws out a series of literal-level comprehension questions. Facing blank stares from the students, she ends up giving her own summary. This cycle of assigning the reading, questioning, coming up short, and summarizing continues for the rest of the class period.

Now consider a 6th grade small-group reading of *Welcome to Dead House* (Stine, 1995). As students read, the teacher interrupts with, "I wonder what those noises are in the house? When I have questions like this, it sometimes helps me to look back in the chapter." Before she can finish her thought, several students yell out, "The voices are from dead people!" The teacher goes on to tell students that she has seen movies in which the ghost of a person who once lived in a house communicates with the current residents. A student muses, "I wonder whether this ghost will be like Casper." Students and teacher negotiate the text together.

Despite the long-standing practice of literal-level questioning after reading, we have no reason to believe it actually creates better readers. People often confuse *teaching* comprehension skills with *testing* comprehension. This common practice persists in schools despite decades of research indicating that comprehension is a proactive, continual process of using prior knowledge, metacognitive awareness, and reflection to make sense of a text.

When adults think back to what reading comprehension meant when they were in elementary school, they may recall workbook pages that required them to "find the main idea" for a series of unrelated short passages. If you were asked to find the main idea enough times on your own, the thinking went, you would eventually figure out how to do it. We now realize that specific strategies can help students determine what is important in the texts they read and how they can be more strategic before, during, and after the reading so that understanding texts is not such a mystery (Duffy, 2002).

In our work across the United States, we consistently find that many teachers have not yet had the opportunity to study the nature of reading comprehension, even their own. Most new curriculum materials for teaching reading include a focus on strategies, but these materials may not always provide teachers with the theoretical underpinnings of reading processes and of effective comprehension instruction. A good start in the shift from interrogation to teaching would be a schoolwide professional development study of reading comprehension.

Ineffective Strategy 5: Buy a computer program and let it do all the work.

Enter the skills lab. Students wearing headphones sit at their terminals. They look engaged in the task at hand, and they click away on the keyboard and mouse as their teacher wanders around the room. The school recently purchased a reading comprehension program that promises a "complete solution" to the reading needs of struggling adolescents. During the sales presentation, the administrator was told that the program was "teacher-proof" and that students would improve their test scores in a matter of weeks.

But let's take a closer look. As we join Taheen at his monitor, we see that he has the reading program running in one window and a chat room running in another. He periodically glances up from the chat room to answer a computer-generated comprehension question. He gets all the answers right and doesn't seem to be trying. At the computer across from Taheen, Fernando is getting frustrated. He doesn't know the answer, and the computer is unable to offer him any help.

In another classroom, we join Ryan and Clay, two 8th grade students who are most comfortable reading 1st grade-level texts, such as *Spider Names* (Canizares, 1998) and *Tiny Terrors* (Kenah, 2004). Although these books are easy-to-read nonfiction, they nevertheless include information that even older readers would find fascinating.

The teacher capitalizes on the students' background knowledge by having them talk as they work on their current project. They are dictating to her a story to accompany an intriguing illustration from the wordless picture book *The Mysteries of Harris Burdick* (Van Allsburg, 1984). They debate the most interesting word choices (for example, *hurt* as opposed to *devastated*) while their teacher acts as scribe. They are

eager and able to reread this lengthy and complex story—written in their own words—and revise it to make it more interesting and grammatically accurate. Their teacher explains certain conventions of language and draws their attention to literary devices that other authors use as they write. For example, when the boys decide that they need to let readers know early in the story that something bad is going to happen, the teacher locates several picture books that include examples of foreshadowing. This not only gives the students ideas for their own writing but also inspires them to recognize this tool in their strategic reading. This teacher is indispensable.

Although computers and Web sites may reinforce skills, they can't provide the specific feedback that students require. Intervention programs need to increase, not decrease, teacher involvement (Ivey & Fisher, in press). In addition, intervention programs—computerized or not—must be based on assessment information and provide students with reading comprehension instruction rather than focus on a single aspect of reading or writing, such as phonics, fluency, or spelling.

What It Will Take

Improving reading comprehension and instruction in the upper-elementary and secondary grades will require a great deal of time and effort. There is no magical set of strategies you can get from an inservice workshop. Real changes in literacy learning and teaching will most likely result from a schoolwide literacy plan and strong leadership (Ivey & Fisher, in press).

Bringing about such a change means devoting resources to literacy-related personnel and to large volumes of high-quality, diverse, multileveled reading materials in all subject areas. It requires a commitment to providing literacy assessments of all students for the purpose of designing purposeful and appropriate instruction. It means creating a culture of collaboration and peer coaching. Finally, it requires that professional development focus on building teacher knowledge and expertise.

Is this a tall order for schools when the immediate need is to improve their current students' reading comprehension? Absolutely. But we are doing struggling students no favor when we perpetuate strategies that do not work.

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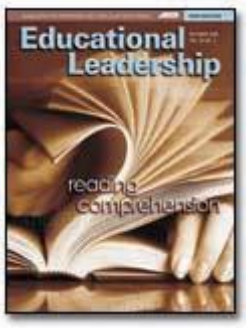

Inside Amy's Brain

Marilee Sprenger

NOTES

Chronic fatigue, emotional highs and lows, social pressures, insecurity, poor nutrition, romantic crushes, low impulse control: How does an adolescent get through the school day?

At 6:00 a.m., the radio alarm goes off. Amy opens one eye, looks at the clock, and presses the snooze button. At 6:15, the radio starts to play again. In a stupor, Amy reaches over and again hits the snooze button. At 6:30, when the alarm goes off for a third time, Amy's mom is standing over her. "Up, young lady! You'll be late for school if you don't get out of that bed right now!"

Amy stretches and pulls the covers up beneath her chin. Just as she's about to snuggle under her blanket, her mom yanks the comforter off and folds it down to the bottom of the bed. Sleepy and chilled, Amy gets out of bed and heads to the warmth of the shower. Play practice until 9:00 the night before kept her up late studying, and then she had to catch up with her friends on the phone.

According to research, adolescent learners need 9 hours and 15 minutes of sleep each night (Carskadon, 1999). Ever since Amy's biological clock changed with the onset of puberty, she has found it difficult to fall asleep before midnight. Unfortunately, her school's starting time—7:30 a.m.—requires that she get up at 6:00. Chronic sleep deprivation makes her cranky.

The shower is soothing and wakes Amy up a bit. She carefully puts on her makeup, fixes her hair, chooses an outfit after some consideration, and heads toward the front door.

"Not so fast!" Mom says. "You need to eat something." Amy's mom is right. As the only organ in the body that cannot store energy, the brain needs breakfast to jump-start (Wolfe, Burkman, & Streng, 2000). But Amy looks at the food on the table and whines, "I can't eat eggs this early in the morning." She grabs a piece of toast with jelly, picks up her backpack, and heads out the door before her mother can say another word. She barely makes it to the corner in time for the bus. Plopping down in the seat next to her friend, Samantha, she closes her eyes and tries to doze on the way to school.

Sam, however, has other plans. "Amy, the boy in the last row keeps looking up here. He's really cute. Do you know his name?"

The words "really cute" make Amy open her eyes, sit up straight, and turn around. "That's J.D. Smith. He just moved into our school. He is *hot!*" The girls flash him smiles and chatter for the rest of the ride.

Amy's first class is chemistry. This is Tuesday, so Mr. Porter is lecturing. Amy sighs with relief. She has a chance to catch up on her sleep. On Monday, Wednesday, and Friday the class has lab, so she has to stay alert. But today . . . she quickly drifts off to dreamland. In fact, a glance around the classroom would reveal many students either sleeping or gazing blankly into space.

Mr. Porter doesn't notice that his lecture is ineffective. Although he realizes that his early-morning class is quiet, he likes the fact that these students don't cause any discipline problems. It's a nice way to start his day.

Someone needs to explain to Mr. Porter that his first-period students need some stimulation to wake them up. At this time of the morning, the adolescent brain is still bathed in the sleep chemical melatonin, and some adrenaline would help overcome its effects. Talking to one another about the content of the lecture, role-playing, or creating a poster would give the students enough "good stress" to keep them involved in the class.

For second period, Amy goes to English class. She is more awake now and enjoys the class's study of *Romeo and Juliet*. The students have compared the star-crossed lovers to those in modern books and times. Viewing *West Side Story* helped them see how cultures affect relationships. Mr. Miller, the English teacher, knows that his adolescent students respond to emotion and novelty.

As a result of the sex hormones that are flooding their limbic system—the brain's emotional center—adolescents experience intense feelings and seek out situations in which they can express their emotions (Wallis, 2004). The frontal lobe of the brain—the part that contributes the judgment, organization, and planning that constrain our emotional impulses—is the last area to mature and is not yet functioning at full capacity in most adolescent learners. Adults must act as the frontal lobe for these students (Giedd, 2002)—as Mr. Miller does when he allows them to engage emotionally with the content he teaches, but within the parameters he has established.

Physical education is Amy's next stop. She notices that her agility is improving. She is refining her skills in dancing and in most sports. Amy doesn't realize that the parietal lobe of her brain is maturing. Because this lobe affects movement and spatial awareness, most adolescents find that their skills in these areas are expanding (Feinstein, 2004).

This week, the class plays volleyball. Amy loves to spike the ball across the net. She is pleased when she sees Gina on the opposing team. Gina is dating Amy's old boyfriend, and Amy hates her. She lets her limbic system and her intense emotions take over as she spikes the ball into Gina's face. It looks like an honest mistake. Amy apologizes, and Gina accepts—but both girls know that Amy was trying to get even. When Amy's frontal lobe becomes better developed, she will be able to control outbursts like this one.

Physical activity is very good for Amy's cerebellum, the structure in the back of the brain that coordinates movement. Recent research suggests that the cerebellum also coordinates cognitive thought processes and that the more physical exercise adolescents get, the better their brains will process information (Giedd, 2002). By encouraging physical activity and intramurals in P.E. class, Amy's school helps its students build important connections in their cerebellums. Academic classrooms should also include movement to activate and strengthen this important brain structure.

Amy now heads for her second-year Spanish class, conducted entirely in Spanish. Last year, Amy would have found it difficult to speak Spanish during the whole class, but now it seems easier for her to memorize the vocabulary and connect words to objects.

As the adolescent brain develops, memory abilities increase in the frontal lobe. The temporal lobe located at the sides of the head above the ears is also maturing, resulting in better communication skills (Feinstein, 2004). This is an excellent time in students' development for teachers to encourage communication activities, such as debates, reader's theater, and oral presentations. Because some adolescents are further along in the communication process than others, educators also need to take time to clarify students' questions and concerns to ensure that all students understand expectations.

Finally, it's lunchtime! Amy is famished. During adolescence, the female's brain secretes chemicals to make her hungrier in an attempt to prepare the body for childbearing (Brownlee, 1999). Wide hips are desirable for this process. But wide hips are not what Amy wants. She must fight off the urge to overindulge. Her friend Tonya, who gains weight much more easily, has an even harder struggle. Tonya sits at the cafeteria table watching others consume sandwiches and pasta, while she only lets herself munch on vegetables and salads. She is frequently hungry and finds it hard to concentrate in class.

Amy and Tonya sit at the table reserved for the "fringe" group—girls who sometimes get to hang out with the most popular girls, but sometimes don't. As Amy looks over the cafeteria, she can see the cliques that compose the high school social scene (Giannetti & Sagarese, 2001). The Loners sit separated from any group, rarely making eye contact. The Friendship Circles—small groups of girls who are close friends—sit in the middle of the room. They don't seem to care that they are not popular. Amy doesn't "get" them. The fringe group sits as close as it can to the popular group, but still not close enough.

Today Amy wants to check out the new boy, so she just grabs a bag of chips and a diet soda. So far today, she has eaten only carbohydrates. J.D. is at the other end of the cafeteria. Amy walks past him twice, hoping that he will notice her, but he seems to be entirely involved with some friends and his lunch. Amy worries that she's not pretty or popular enough to attract boys, and she heads for the restroom to comb her hair and fix her makeup.

Social skills and emotional literacy are still developing at this time in life. Putting students in mixed-sex and mixed social groups for academic networking and projects may help them find common ground. Teachers who provide adolescents with the opportunity to see the value in their own contributions as well as in the contributions of others will be providing a lifelong and brain-changing learning experience.

During fifth period, Amy has study hall. The carbs she has consumed are triggering the release of the chemical serotonin, which makes her feel mellow and sleepy (Goldman, Klatz, & Berger, 1999). Instead of finishing her history homework for next period, she puts her head down on her desk and drifts off. It seems like only seconds later when the bell wakes her, signaling the end of the period. Amy's heart pounds as she grabs her books. She starts to worry that other students in her history class might make fun of her for not doing her homework, and tears come into her eyes. This emotional reaction is common for Amy these days.

Amy has a stroke of luck today. Miss Reed has gone home ill, and the substitute teacher gives the students study time instead of collecting the homework. Although still groggy, Amy is determined to finish her history homework for tomorrow. But Tonya and Samantha are in her history class, and they move next to Amy.

"I'm going to have a sleepover this weekend. Who should I invite?" Tonya asks.

"I have to finish my history homework," Amy says, continuing to write.

"I think we should see if the boys can sneak over to your house after your parents are asleep!" Sam suggests.

Amy stops working, turns to her friends, and joins them in planning the weekend. If Amy's frontal lobe were more developed, she probably would have continued with her work and reminded herself that she could talk with her friends later. Instead, she displays the poor decision making that is commonplace among adolescents (Wallis, 2004).

Amy's last class of the day is math, one of her least favorite subjects, and she is still tired. But Mrs. Meyers knows how to engage her students and keep them focused. Today she uses problem-based learning. She tells students to work in small groups and figure out what their annual income must be to afford the car of their dreams. Mrs. Meyers appeals to the adolescents with a novel assignment, allows them to work together, and gives them choices. The class quickly gets to work.

The last bell of the day surprises the busy students. Amy runs to the bus to meet Sam and Tonya. She is wide awake for the trip home. But she knows that when she gets there, she must grab a quick bite and then go back to school for another play practice. She is amazed at how easily she remembers her lines. In fact, she has memorized almost everyone's lines. It's so much easier than schoolwork!

Amy doesn't realize that the movement involved in the play helps her remember. Repeating the lines along with the movement creates another cue or trigger for the memory—much like it did in her toddler days of playing pat-a-cake and repeating the rhyme that goes with the actions (Sprenger, 1999). In addition, the play's strong story line sparks the emotional responses that help adolescents focus and learn.

Home from play practice at 9:00 p.m. again, Amy plows through her homework and then writes in her journal before she goes to bed. *Mr. Miller and Mrs. Meyers are the coolest teachers I've ever had*. Amy doesn't realize that their "coolness" reflects their understanding of how to teach adolescents. *I think I'm in love with J.D.* Amy's limbic system, responding to a flood of hormones, creates intense feelings of well-being, unfiltered by the more tempered judgment she might develop when she's older. *Even though I'm looking forward to Tonya's sleepover this weekend, I can't wait for school tomorrow. My homework is finished; I get to find out more about Romeo, I get to work on my math project, and I get to see J.D. But Mr. Porter isn't lecturing, so I have to be awake for first period. I hope I can fall asleep soon*.

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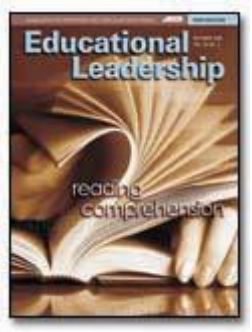

Reach Them to Teach Them

Carol Ann Tomlinson and Kristina Doubet

NOTES

Four high school teachers show that teaching adolescents is about relevance and challenge, affection and respect.

Two observations from teachers of adolescents are so prevalent these days that they sound like theme music. The more recurrent refrain says that there's no time for covering anything in high school classes other than curriculum or standards: There's no time for discussion, for student interests, for products beyond mandatory quizzes and tests, or for activities. Teachers are under relentless pressure to prepare students for high-stakes tests and for advanced placement or International Baccalaureate exams. The amount of material to cover simply exceeds the time available for covering it.

The second refrain has to do with the impracticality—if not impossibility—of really knowing one's students in a high school setting. There are too many of them, and they are indifferent—or ill-behaved. Combined with the avalanche of pressure for high test scores, these factors make it unfeasible for teachers to know their students more than superficially.

Snapshots of four high school classrooms challenge these two pervasive beliefs. We profile four teachers who connect with their students and who persevere in making learning a process that engages the minds and imaginations of the adolescents they teach. These teachers' professional work centers on knowing their students well enough to make learning interesting and on knowing their content well enough to shape it to their students' needs. These snapshots serve as an antidote to the very real pressures that can make us forget what lies at the core of transformational high school classrooms.

Katie Carson's Classroom: A Labor of Love

Katie Carson, a fifth-year teacher at Fauquier High School in Warrenton, Virginia, teaches English to 9th and 11th graders. She is a young teacher who spends some of her free time acting in and directing a comedy improvisation troupe in Washington, D.C. But teaching is her labor of love.

With the exception of a few overachievers in each class, says Carson, kids in high school "have zero desire to learn more about grammar, literature, and punctuation." The magic of early experiences with reading and writing is gone. "So unless I create a class in which they discover one another's gifts and challenge one another, or unless they have a relationship with me," she adds, "students have no desire to learn those things."

Getting to Know One Another

Carson creates an environment in which students learn about one another and get to know their peers' strengths. She places students in groups in which they'll work for a quarter of the year. Once a week, on a randomly selected day, she gives the groups five-minute challenges, such as building the tallest tower in the class out of bits of paper and paper clips. You can hear students saying among themselves, "We need Steven for this job. He's the man!" This kind of focus is particularly important for students who are not initially seen as academic contributors.

The room is set up to welcome students, who can sit in armchairs, on a couch, or at tables. Carson also studies learning preferences and gives students opportunities to learn in ways that meet their various needs. "It's part of showing respect," she says.

Attendance-taking begins with an "attendance question" as soon as the bell rings. As Carson calls their names, students respond to the day's question, providing a brief justification for their responses.

"OK, people, this is a big one today. Definitive answer. Coke or Pepsi?" On another day, she begins, "OK, folks, you've just been given a sampler box of Russell Stover candy, but the map is missing. You bite into a piece and much to your dismay, find you've chosen a _____." Students answer by filling in the blank. Before long, students bring her slips of paper, whispering, "Here's an attendance question. It's really good!"

Sharing Stories

Carson encourages students to tell their own stories. "I'll even delay a test for a few minutes for a good story," she says, "but it has to be a good one." On the first day of class, she puts on the board a story arc, which contains seven numbered lines:

1. Once upon a time . . .
2. And every day . . .
3. Until one day . . .
4. And then . . .
5. And then . . .
6. Until finally . . .
7. And ever since . . .

This is her way of teaching students about exposition, rising action, conflict, climax, and denouement. Teacher and students use the academic words in their conversations about stories, but the story arc serves as a barometer for assessing the stories that they share with one another. "You all have experiences that make good stories," she reminds the students. "But it's all in how you tell them."

Mastering the Content

Carson embeds the required content standards in her instruction, but the students feel that she's teaching them, not just "covering material." In a recent Utopia project, nearly all her juniors said that they would do away with state standards if they could. "What's the point?" they asked, and they lamented the number of times their teachers say, "Now you'll need to remember this because it's on the standards test."

Carson reminded those juniors that this was, in fact, a standards test year and that in three weeks, they would be taking the standards test in her class. "Yeah, but you don't bring it up all the time," they responded. "You prepare us without teaching to the test."

This is evident in a unit on 19th century American poetry. As the students compare various poems with artwork and photographs, Carson presents a quotation from a British author indicating that Americans have no literature. The students argue heatedly against the author's sentiment, using works that they have read as evidence to the contrary, and they ask whether they'll be able to "critique more artwork" after lunch.

Making Writing Relevant

When her class discusses a golden age of literature, Carson asks students to describe golden ages in their own lives and uses their descriptors as a segue into a serious discussion of literature. She notes,

> My job is to make sure the kids know that I care, that I appreciate their sharing the truth about their lives, and that I value their opinions. When we have that personal trust, it's not so horrifying for them to write and turn that writing in to me.

Too often, she says, writing in high school is an exercise of turning in a paper to get it back covered with red marks. We forget, she suggests, how important it is for students to know that they have stories to tell and that those stories are full of discoveries about human nature.

Ned, for example, was a low-achieving student who did not—would not—write. Then he made the junior varsity football team. Carson told him that she was impressed because she'd never understood football. "Gosh," he said, "you must be dumb." For the rest of the year, he wrote about football in his journal, and she wrote back about football. In passing, she would mention in class that she had watched part of a game on TV or at school. "I understood why the flag was thrown. Thanks so much, Ned!" His stories had helped someone—and he was proud.

George Murphy's Classroom: It's All About Inquiry

As students enter George Murphy's 10th grade biology class, he chats with them individually about their reading and experiments. Murphy is science department chair at Fauquier High School in Warrenton, Virginia, and has taught for 24 years. When class begins, he proclaims, "Welcome to your favorite class of the day!" Students grin as he launches into the daily agenda posted on the board. There's a sense of urgency and excitement about the class: Important work is waiting, and there's no time to waste.

Demonstrating Understanding

The current science unit centers on energy and respiration. Murphy has embedded the key understandings in an exploration of diet and energy. He begins the unit with an interactive demonstration that introduces the key concepts of energy, action, and reaction. Students observe a new piece of equipment—an empty fermentation apparatus—and they hypothesize about its possible use. Their ideas initiate a demonstration of a basic working fermentation setup. Once students are clear about what is required for fermentation, they launch into an inquiry process to determine what caused the reaction they witnessed in the demonstration. Murphy carefully guides the process to be sure that students "get it" before they design their own experiments, in which they will pose and test a hypothesis about the nature of energy. Murphy's students demonstrate their understandings about energy both by completing a lab report and by creating a product that they choose from a list of teacher-provided and student-designed options.

Students select one of three tasks to continue learning about energy: Some students finish their experiments; some work with a study guide on the topic; and others work on laptops to complete a diet planner, an exercise that helps them analyze energy consumed and energy expended in their own lives.

There is no class textbook. Instead, Murphy guides students in finding authentic and reputable information sources, in print or on the Web.

Making It Relevant

Inquiry is at the root of Murphy's instruction. "I think everything in biology should be relevant to what students experience in their own lives," he says. "It's the study of life, so a student should be able to connect biology with everything we do."

He tells his students that if they can't see how a given topic connects to their lives, they probably shouldn't be studying it—either because it's not biology or because he hasn't clearly communicated the essence of the topic. He realizes that he must sometimes reteach material in new ways to help students find that connection. "We can talk about the ATP cycle, photosynthesis, and respiration, but that doesn't grab kids," Murphy says. What *does* rouse their curiosity is analyzing the foods they're eating and burning and figuring out the caloric content.

Murphy teaches his students on a half-year block schedule. That constricts the time he has to get to know them, so he makes his curriculum and instruction compelling from the start.

He explains,

> It's not the standards that will make school relevant and vital for students. I want to get them interested in what they're doing. I'm not up front to dance for them. I want to present the students with a challenge, see them rise to the challenge, see them *want* to learn. I want to dare them to have a good time with science.

Probing Student Thinking

Murphy moves among the students as they work with absorption on their tasks. Two girls who are using computers and the Body Mass Index (BMI) instrument to work on their diet profiles commiserate with him about their results, declaring that switching from whole to low-fat milk is doable but that giving up cookies in exchange for fruit is asking too much. A sturdy football player tells Murphy, "That's two pieces of bad news today. I have to lower my carbs—and I love carbs. I also have to lower my fat, and that stinks." Another boy is searching on the Internet for a formula that he believes could call into question the figure generated by the BMI device. Two girls discuss the feasibility of "fooling" the instrument by combining their weights.

Two boys in the design phase of their experiment explain their hypothesis and how they arrived at it and then return to a discussion about what amount of glucose and water will work best in their experiment. A boy working with the study guide talks with Murphy about his topic, his research, and the Internet itself.

That Murphy engages both the interest and trust of his students is evident in the purposefulness of the classroom, in the respectful exchanges between Murphy and his students, and in the spirit of cooperation among the students themselves. As the students learn about biology, they discover its capacity to reveal life and to help them develop as thinkers. His instruction has nothing to do with coverage—it's about inquiry and community.

Chad Prather's Classroom: Making Connections

Chad Prather is a second-year teacher who teaches 9th graders world geography and world history at Charlottesville High School in Charlottesville, Virginia. Most of his world geography students read well below grade level, and they have little motivation to learn. Says Prather,

> These students haven't been celebrated throughout their education. They've gotten used to tracking and very used to worksheets. When teachers give them something challenging, the students rebel because they're so used to worksheets that [the new assignment] just seems too hard.

Prather finds this situation tragic and is determined to show the students their untapped potential.

He's discovered that success lies in making two kinds of connections: connecting students with important ideas and establishing his own connection with students as individuals.

Connecting With Ideas

Prather organizes curriculum around key concepts rather than memorization of facts. Too much of what goes on in school, he believes, is focused on knowledge rather than on understanding. Knowledge, he says, may get students to answer "who" and "what" questions on a state test, but it falls short of helping them answer the more meaningful "how" and "why" questions. He adds,

> Teachers have given these kids worksheets over the years in the hope that the worksheets would pound knowledge into their heads, that repetition would create memory. It doesn't. No one expects these students to understand. I tell them that I won't give them what they're used to. They need to step up to the challenge of understanding. Then the knowledge will take care of itself.

Prather's students work with units that raise important ideas in geography. The unit on space and interaction, for example, probes how humans adapt to and alter the environments in which they live. He explains,

> When I prepare a lesson, I try to imagine myself as one of my students, and I ask myself—as though I were that student—Is this an engaging use of my time? Then I ask myself—as the teacher now—Is this an effective way of demonstrating meaning?

Connecting With Students

Prather says that connecting with his students is even more important than his sustained work to connect his students with the curriculum. "I had the idea early on," he says, "that if I were assertive and hard-core with the rules, then the students would work hard for me." That's not proven to be the case. What *does* work is connecting with students. Not only does it more successfully get them to work, but it also encourages them to accept living within the classroom rules. "The curriculum that I write has to come from a place that the kids are comfortable with," says Prather. "And that obviously starts with the teacher-student relationship."

The world geography class begins with a review that prepares students for a brief Jeopardy-like game. "I don't hear all of you reviewing," prompts Prather, "and that gives me great displeasure. My heart is breaking as though it were the Earth's crust during plate tectonics." Students grin and begin reviewing individually, in pairs, or in small groups. In the 10-minute Jeopardy game that follows, excitement builds to a pinnacle when an unlikely student selects and correctly answers a 1,000-point question. The class erupts in whoops of joy and praise.

Prather quickly transitions to a slide presentation designed to give his students images of the Earth's power. He understands that the process of a hurricane forming over an ocean means little to his students because most have never seen the ocean. He gives them cues about what matters most for them to understand, and he emphasizes the relationships, causes, and effects among the ideas depicted in the images.

Students move next to their "Thug Nasty Big Eartha" projects. For the unit's final product, students are asked to assume the role of lead producer of a new CD and select a project from a number of options that demonstrate that the Earth is a "thug nasty" place. Some students choose to write the lyrics for the hit single, "Big Eartha's House"; others may choose to design the CD cover. All product options focus on the Earth's power. "It's hard-core," says Prather. "It doesn't back down." Students look at ways in which the Earth exerts its supremacy, especially in terms of extreme weather and climatic forces. Students use teacher-provided grids to take notes on "molten hot performers," such as Twisted Sister (tornado), Dry Bones (drought), and Grand Rapid (flood). Each product choice has a checklist for success, and all choices focus on the important information and ideas from the unit. Product options address varied student interests and learning modes.

In class, students work on their products as their teacher walks among them, coaching them. Because many of Prather's students have difficulty completing schoolwork at home, he and some colleagues provide a place in school in the afternoons for the many students who need time, space, and support for their work.

Prather knows he has much to learn about his students and about how best to connect them with ideas that they thought were out of their reach, but his students send him signals that he's working in the right direction: They talk with him about issues related to race and school, write him thank-you notes, and come by his classroom to share their successes.

Lori Mack's Classroom: Making All Students Count

Lori Mack, a veteran teacher with 18 years of experience, teaches 12th graders human anatomy and physiology at Charlottesville High School in Charlottesville, Virginia. Her culturally diverse seniors have varying reasons for taking the class but, according to Mack, share a lack of science background and skills.

Affection and Respect

As students filter into class, Mack chats with them about their day in an easy but businesslike way. "Are you ready?" she asks the students, with a hint of fun in her eyes as she finishes taking attendance.

"Ready," they respond with certainty—all but one of them. Mack addresses her: "I know you're tired, but try to hang with me, will you?"

"I will, Ms. Mack, I'm listening," the student responds earnestly.

The teacher nods and explains to the students that her plans for the day have changed. Their previous day's work indicates a need to revisit some of the unit's key concepts. They'll watch a brief film to help them think about the concepts in a different way and then work in groups to create a skit that demonstrates the concepts in action. The students are clearly interested.

"Guess what we'll be talking about in the video and skits," the teacher prompts enthusiastically.

"Diffusion?" offers one student.

"Yes, diffusion!" Mack exclaims with relish.

"Osmosis?" suggests another.

"Osmosis!" she affirms with an almost religious fervor—arms flung in the air, face turned upward.

Students grin and keep guessing. "Homeostasis?"

"Yes! Homeostasis! It's a *beautiful* thing!" Mack exclaims.

As students interact with her, she circulates around the room, patting one student on the back, encouraging others, and never missing a beat with the discussion. "I'm a person to my students," says Mack. "Making myself personable allows them to be a person back. There has to be an exchange of personhood."

"The video," she continues in a hushed voice, "is called *The Magic of Cells*!"

Mack prompts students to look for the important things as they watch the video. "Don't write down stupid little facts. Rise above it!" Throughout the film, she coaches students on their note-taking skills. "Don't get so caught up in writing that you miss the cool stuff. You need to see what it means!" Then, "You can do this! You can do this!" She draws students' attention to a demonstration on the video. "See, this is what *semipermeable* looks like. Do you understand better now?" She sighs with love every time homeostasis is mentioned. The students chuckle but never stop paying attention to the film.

As the film ends, the teacher gives her students a "two and two"—two minutes to check the accuracy of their notes against the notes of two other students. As they do this, she again walks among them. Her language is endearing. "You gotta get with it," she says playfully to a student who has forgotten something. "Think you can hang?" she asks another. Her affection for the students is returned to her in kind. She also shows respect, persistently expecting—and demanding—high-quality work.

Mack then divides the students into teams and writes the names of the members of each team on the board. She deliberates aloud about who should be in which group. In truth, she has already developed the teams as part of her planning, but she has found that when the students hear her musing about her decisions, they understand her reasoning and don't question the composition of the groups. This process encourages their trust in her. Also, she says, it gives them time to adjust to working with whoever is on their team, removing the element of surprise and the balking that can follow.

A Community of Learners

The students are absolutely "into" their group work. They exchange ideas, revise those ideas, and build on one another's thoughts with ease. Comments indicating serious thought are evident around the room: "So, how are we going to demonstrate this part of the process?" "Am I supposed to move in and out constantly, or does something trigger my movement?" "Oh, so that's when we'll flip our signs to become the vacuoles!" "No, look at page 417. That's not what it says."

Students rehearse their presentations and revise them as the teacher probes and sharpens their thinking. One group has their demonstration as finely choreographed as a dance and asks, "Ms. Mack, can we present today?" Mack tells them that presentations will begin during the following day's class. Satisfied, one student in the group replies, "OK, then we'll practice again."

As announcements signal the end of the period, Mack reminds her students to clean up because it's not her job to do so. She uses a chance exchange to explain the difference between *may* and *can*. When one student becomes a bit loud, she holds up a ruler and says, "Let me measure how much you're ticking me off right now." He smiles and settles down.

As the bell rings, the teacher stands in the doorway and makes a personal comment to each student. Some comments are playful and some are serious, but it's evident that each student appreciates the connection.

"My forte, my passion, my love is creating a learning environment in which everybody feels safe, able to succeed, and important," says Mack. "In this class, nobody gets to be invisible."

Lessons Taught and Learned

In a time when it's easy to reduce curriculum to coverage and to see students simply as takers of tests, these four teachers remember the important lessons about teaching and learning for adolescents. It's difficult for us as teachers to engage adolescents with a curriculum that has little impact on their lives. It's difficult to make curriculum relevant to lives that we don't understand.

"It's the best job in the world. Of course, it frustrates me to no end," says Mack. "I scream and rant and rave. I get exhausted. But what an incredible ride, to be able to hang out with these kids, to be able to watch the transformation."

And transformation is really what teaching is all about.

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STACKING THE DECK

NOTES

Principal Leadership

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Louanne Clayton Jacobs

When teachers know how to model and support literacy in their subject areas, they create an environment conducive to helping students achieve fluency.

I've spent the past decade as a reading specialist in a middle school; a regional reading specialist serving 37 elementary, middle, and high schools; and finally as a staff development coordinator serving 11 school districts and a college professor preparing undergraduate education majors. In the capacity of reading specialist, I have conducted countless workshops and seminars for grade levels, departments, and entire faculties on the topic of literacy. As a staff development coordinator, I continue to conduct workshops but also coordinate professional development for a region with 11 school districts. As a college professor, I teach reading methods courses to undergraduate students.

I began to notice that no matter how many workshops I conducted on the topic of literacy, there was always another request. Although my staff development office provides more professional development in the area of literacy than in any other area, literacy remains at the top of each school and school system's yearly professional development request lists. Although preservice teachers take a number of reading and literacy-related classes, they continue to indicate that they feel inadequately prepared to meet the literacy needs of their students during their first year of teaching. I wondered why. Why the constant demand for literacy-related professional development? Why the feelings of inadequacy? What needs exist that are not being met?

I believe that I have discovered the answers to these questions by listening to others' questions. When I conduct workshops, a portion of each session is devoted to questions and answers. Often, participants ask about situations unique to their school or district; equally as often, their questions are universal for all schools and districts. I began to keep a list of commonly asked literacy questions. I added the questions I fielded from school and district staff development specialists and chose of undergraduate students during their intern experiences. I noticed that the commonly asked questions developed into a pattern-in essence a larger question: How can teachers take all of the individual pieces of the literacy instruction puzzle they receive in their training and put those pieces together into a cohesive instructional framework, particularly a framework for content-driven middle level and high schools.

Literacy instruction, especially at the middle and high school levels, often seems overwhelming, particularly to content-area teachers who may have taken one reading course as part of their preservice preparation. Secondary teachers and administrators are under ever-increasing pressure not only to prepare students for high-stakes content assessments but also to teach literacy skills. For most, teaching the seemingly discrete components of literacy instruction (e.g., fluency, decoding, comprehension, and vocabulary development) appears not only daunting but also of less significance than content. Is there a critical mass of literacy instruction that must be reached in order to be successful at the middle and high school level? As one principal so aptly asked after a recent seminar, "What do we need to include in our instructional plan in order to stack the deck in favor of literacy for our students?" My answer is that teachers must:

* **Know the learner**

*** Match instruction to students**

*** Understand the unique literacy demands of content areas**

*** Understand the essential nature of literacy**

*** Make the invisible visible**

*** Create an environment that nurtures literacy.**

Know the Learner

A coach would never plan a game strategy without analyzing the strengths and weaknesses of his own team and the opposing team. An actor would never take to the stage and expect to be successful without some knowledge of the audience to whom he was playing. Neither should a school develop a literacy plan without understanding the unique nature of the students for whom the plan is developed.

I recently conducted a districtwide seminar for teachers of grades 6-9. The first activity was to write statements describing a typical student on strips of overhead transparency. Some of the descriptors included, "social butterflies," "confused," "self-conscious," "unorganized," "need movement," and "outside doesn't match inside." Such statements raised gales of laughter, cries of agreement, and were often shouted aloud along with a student's name. While the exercise was a fun one and served as a nice icebreaker, it also illustrated a point: We are teaching individuals with unique personalities and traits. It's simple to look at state and national assessments and notice, for example, that students seem to be weak in identifying main idea and detail. It's more difficult to look at our students and ask, "So how do we plan to teach main idea and detail to these social, confused, self-conscious, disorganized students who look like adults on the outside and react like children on the inside?"

Match Instruction to Students

Certain instructional tools are better matched to the unique developmental needs of middle level and high school students. If we know, for example, that our students require social interaction yet are terribly self-conscious, an instructional plan that relies solely on whole-class instruction and requires students to "perform" in front of the class would not be appropriate. A better instructional approach would be to structure classes so essential literacy skills are taught in small groups where social interaction is fostered in a more emotionally secure atmosphere. Secondary schools offer the perfect opportunity to incorporate guided reading groups, for example, into an instructional plan.

If assessments reveal that our students lack depth in their vocabulary development, a number of instructional strategies can meet the academic need and build on developmental demands. Word sorts, concept maps, and other graphic organizers encourage students to develop connections among words and concepts while building upon the kinesthetic nature of adolescent learners (Blachowicz and Ogle, 2001). These tools can also be used as the basis for developing organizational strategies for these most disorganized learners, thus getting both academic and developmental bang for a single buck.

Understand the Unique Literacy Demands of Content Areas

Middle level and high school content-area teachers often ask questions that reveal their feelings of frustration when it comes to teaching literacy. They say that they feel

perfectly confident teaching their subject but unprepared to teach reading or other literacy skills. And their feelings are perfectly justifiable. Content-area teachers should

not teach literacy-they should support literacy within their content areas. This is not only what they should do, but what our students need them to do.

A biology teacher knows, for example, that the way a science textbook should be read is unlike the way a novel should be read. There are illustrations, headings, bold words, and other text features that should be attended to prior to reading the body of the text itself. Many teachers know this, but do not articulate it to their students. To develop a plan for literacy instruction, content-area teachers should be given time to recognize the unique literacy demands within their own subject area and develop instructional strategies to meet those demands. A simple instructional strategy that can aid content-area teachers (especially science and social studies) is Read Around the Text (Jacobs and Jones, 1999), which encourages attention to text features.

Understand the Essential Nature of Literacy:

Literacy, in its essence, is nothing more than making connections. It is the ability not only to acquire new knowledge but also to access previous knowledge and make cognitive connections, thus building new knowledge. Further, it is the awareness that such processes and connections even exist.

A few years ago I was working with a group of struggling eighth-grade readers and modeled my own questioning process aloud as I read a social studies passage to them. Each time I asked myself a question, I placed a red Post-it flag on the specific passage that prompted the question. When I found the answer to my question, I placed a green flag on the text that supplied the answer. When I finished, the class practiced using the strategy in small groups or with partners, and then practiced independently.

After a few days, students not only began to feel comfortable using the strategy but also began to enjoy it as if it were a game. I was working with a small group of students who were still having trouble holding a question in their minds while reading for the answer when the near-silence of the room was punctuated by a shout from one of my favorite students: "Damn! I get it!" This young man had numerous challenges in addition to his reading difficulties, so the fact that he had just used language inappropriate to the classroom was something I was willing to overlook. Moreover, since he had gained the complete attention of the entire class, I asked just what it was that he had gotten. He replied, "I just got this whole reading thing! I just figured out that you were wanting me to be thinking while I was reading. I thought I was just suppose to be reading. This is a whole new thing, isn't it?"

This student had managed to complete almost 10 years of education (he had been retained in kindergarten and fifth grade) without understanding the essential nature of literacy. He could sound out the words but did not recognize that he was suppose to be engaging in a dialogue with the words that connected them to his own thinking to create new knowledge. I am convinced that he did not know that he was supposed to be "thinking while he was reading" because he had never seen that thinking modeled for him.

Make the Invisible Visible

If we want students to become strong, flexible, independent readers, we must learn to model our own reading processes. Since reading and other literacy processes are cognitive in nature, the processing occurs in our heads. We must learn to make that invisible processing visible for students. This is the very definition of explicit teaching. Further, explicit teaching demands that we teach students not how the text is being processed, but how we, as expert readers of our subject matter, do it. This is the essence of true modeling.

Create an Environment That Nurtures Literacy

Brian Cambourne (1995) has defined seven environmental conditions that must exist for literacy learning-or any learning-to occur: immersion, demonstration, expectation, responsibility, use, approximation, and response. If we want students to exhibit a particular type of literacy, then their environment must be rich with that literacy. If we want them to be readers, for example, they must have many rich opportunities for reading. Demonstrations must be authentic; they must lay bare not how the "thing" is done, but how the teacher does it. Expectations of literacy achievement should be implicit and explicit-teachers and administrators must really believe that all students can achieve and must transmit that belief to students. Responsibility for literacy tasks should shift gradually from teacher modeling to student-guided practice to independent practice. Practice should focus on authentic uses for the literacy skills that are relevant to the lives of young adult students. Student approximations toward a literacy goal should not only be accepted but applauded and responded to with honest feedback and continued modeling.

If we want our students to become literate, we must analyze our own literacy. We must be aware of our own processing, make that processing explicit, recognize the unique developmental needs of our students, use learning activities that meet those needs, and create an environment that nurtures learning. In this way, we stack the deck in favor of literacy learning for secondary students.

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