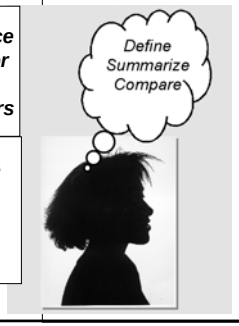
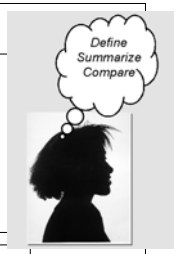
Rigor, Relevance and Reading for Struggling to Average Readers



Peter Pappas
Model Schools Conference
June 2005

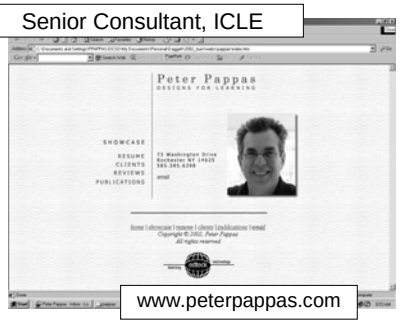
Agenda

1. Building background knowledge
2. Rigor, Relevance and Learning strategies
3. Using the strategies



Also workshop #63
for High-Performing Readers
Plus additional #62 Tues at 11

Senior Consultant, ICLE



www.peterpappas.com

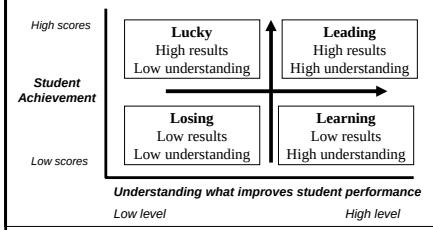
NCLB - a revolution in accountability

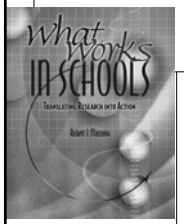
"Student achievement is primarily the function … **background** of the **student**."
Jencks Report 1972

"… **all children** must reach … proficiency on challenging state academic assessments." ***NCLB 2001***

Doug Reeves on "targeting success"

the key to NCLB





Robert Marzano:
What Works in Schools

"35 years of research concretely identifies 11 factors that are **the primary determinants of student achievement**."

Robert J. Marzano, What Works in Schools: Translating Research into Action, 2003

The factors that impact student performance

1. **Student**: background knowledge, motivation, fluid intelligence, home environment
2. **School**: curriculum, learning environment
3. **Teacher**: learning strategies, management, goals and feedback

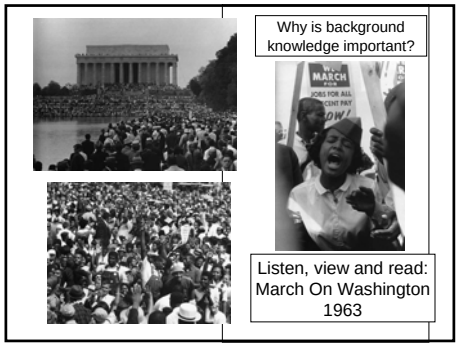
We'll focus on factors you can "grow"

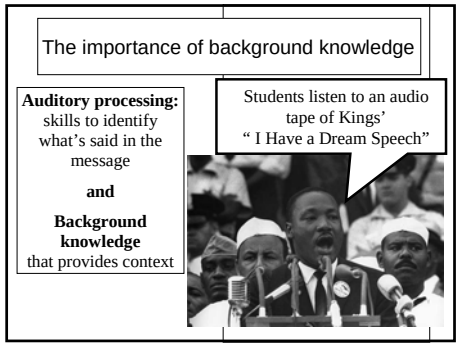
1. Student: **background knowledge**, motivation, fluid intelligence, home environment
2. School: curriculum, learning environment
3. Teacher: **learning strategies**, management, goals and feedback

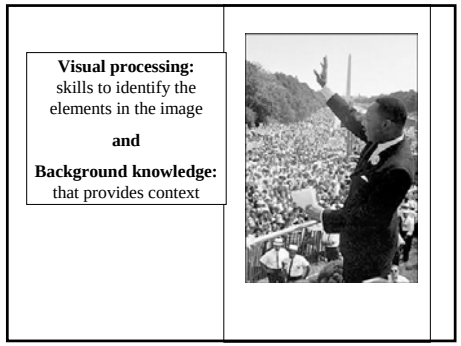
The importance of background knowledge

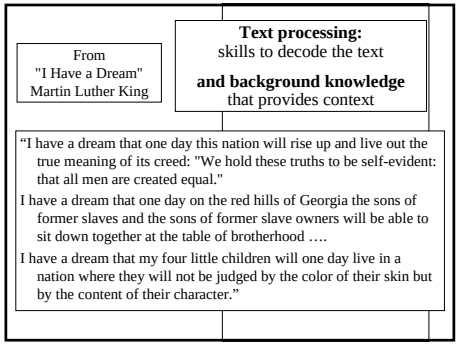
- **What students already know** about a subject is one of the strongest indicators of how well they will **learn new information** relative to the subject
- Our focus is on **academic** background knowledge

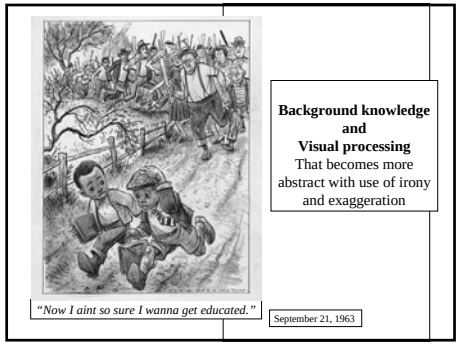
A one-hour introductory workshop by Peter Pappas
www.peterpappas.com

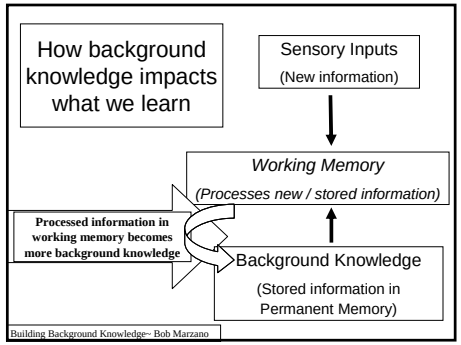


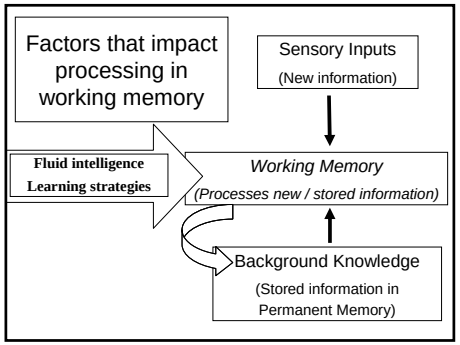


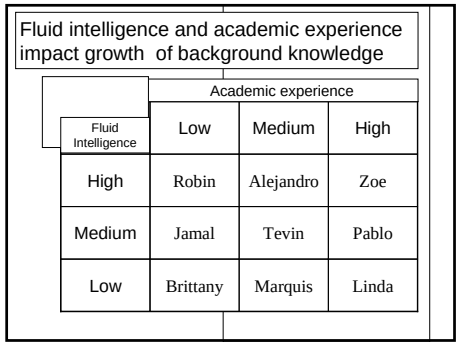




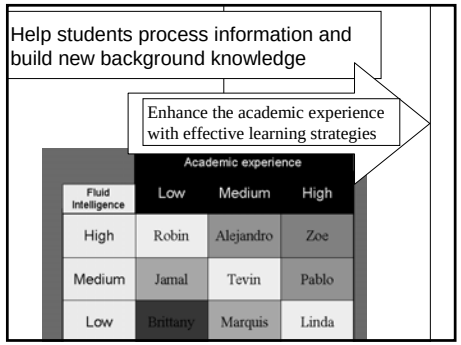








Fluid Intelligence	Academic experience: Low	Medium	High
High	Robin	Alejandro	Zoe
Medium	Jamal	Tevin	Pablo
Low	Brittany	Marquis	Linda



A one-hour introductory workshop by Peter Pappas
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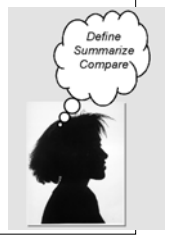
We'll focus on three strategies

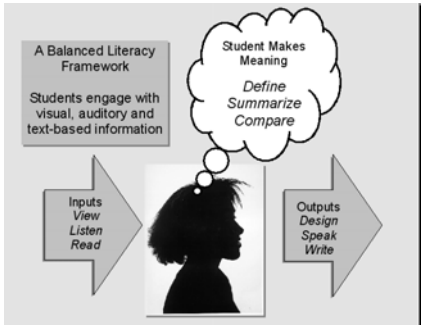
1. Define: what is this?
2. Summarize: what's important?
3. Compare: how do things compare?



Define, Summarize and Compare can be viewed from four perspectives

1. Reading
2. Comprehension
3. Writing
4. Critical thinking

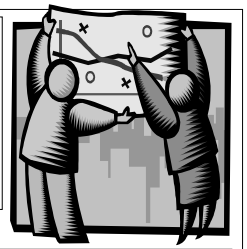
Vary the inputs / outputs – visual, auditory, text



Listening, visual, reading skills overlap

1. Identify details – groups of words, visual elements.
2. Recognizing context –where is this taking place, time period, who's involved
3. Identify relationships –who are the people what is the relationship between them.
4. Identify opinions –in the source information.
5. Infer meaning –the difference between literal information and what it means.
6. Make predictions – based on the information, what will happened next?

Rigor, Relevance, and Learning Strategies



Students must take on the challenge of intellectual work - rather than just look for the right answer.

They can be used at diffident levels of Bloom

Evaluation: appraise, defend, predict

Synthesis: compose, design, develop

Analysis: compare, contrast, categorize

Basic Skills

Application: demonstrate, illustrate, solve

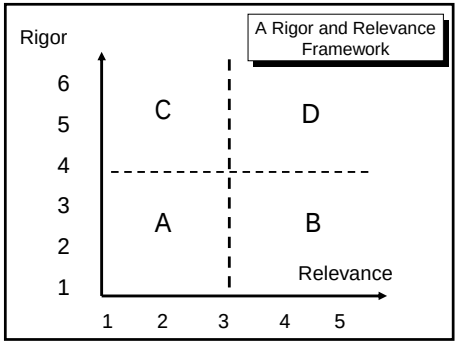
Comprehension: describe, explain

Knowledge: memorize, name, recognize, recall

Make it relevant with real-world application

Using skills and knowledge for school

Using skills and knowledge for myself



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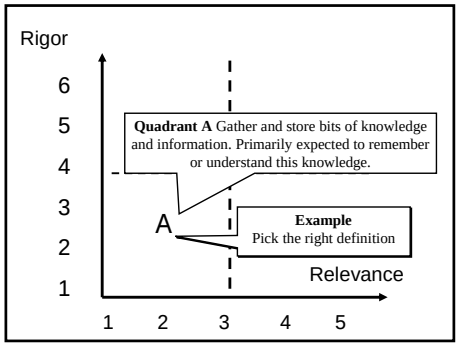

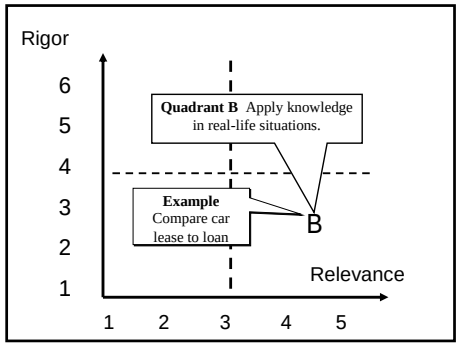

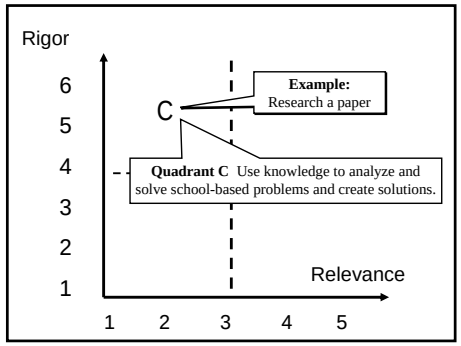

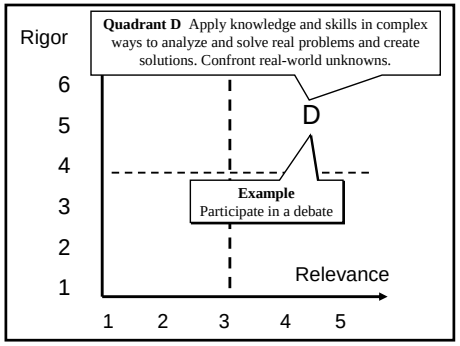

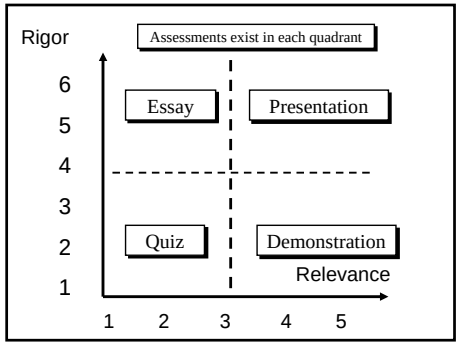

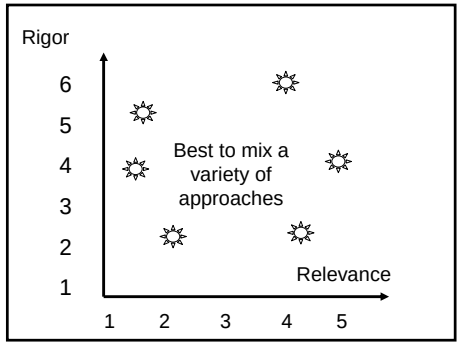

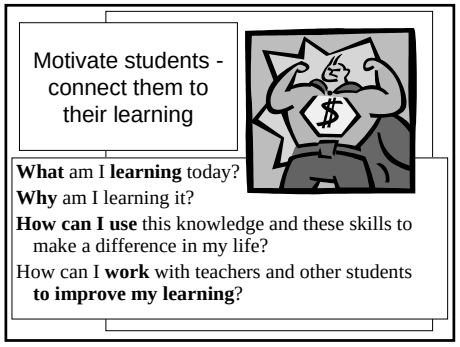

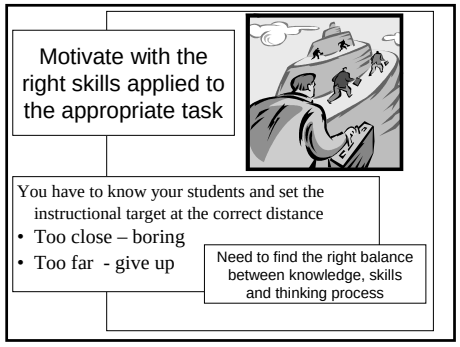

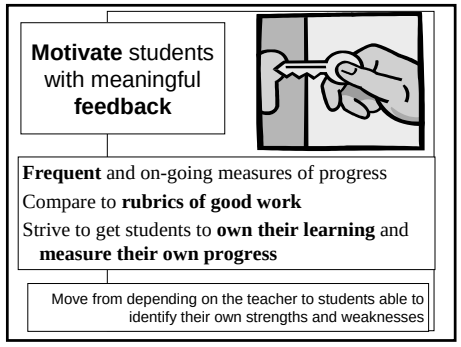

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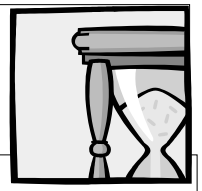
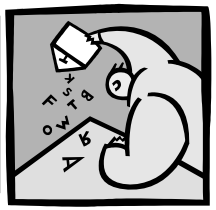
Use ***essential*** questions



- Overarching
- No obvious right answer
- More rigorous – analysis, synthesis, evaluation
- Provoke and sustain student interest
- Timeless – relevant

Guide students to use learning strategies to build background knowledge



"What's going on here?"
"What do you see that makes you think so?"

Remember … it's also about literacy skills!

Are performance gaps caused by poor motivation and effort or are they really problems in reading comprehension?

Di Tri Berrese

Do I Really Have to Teach Reading?~ Tovani

Uans appona taim uas tri berrese: mamma berre, pappa berre, e bebi berre. Live inne contri nire foresta. Naise Aus. (No mugheggia.) Uanne dei pappa, mamma, e beibi go tooda bice, onie, a furghette locclie di doore.

Bai enne bai commese Goldilocchese. Sci garra naltinghe tu do batte maiche troble. Sci puscie olie fudde daon di maute; no live cromme. Den set gos appesterrese enne slipse in olle beddse.

Leiei Slobbe!

"The Three Bears" Translation

Once upon a time was three bears: mama bear, papa bear, and baby bear. Live in the country near forest. Nice House. (No mortgage.) One day papa, mama, and baby go to the beach, only they forget to lock the door.

By and by comes Goldilocks. She got nothing to do but make trouble. She push all the food down the mouth; no leave crumb. Then she goes upstairs and sleeps in all the beds.

Lazy Slob!

Effective literacy **demands fluency**

- Some students do not yet read words with **enough fluency to facilitate comprehension**.
- Some **lack the strategies** to help them **comprehend what they read**.
- Some may **not be able to generalize their strategies to content-area literacy tasks** and lack strategies **specific to particular subject areas**, such as math, science, or history.

Reading is *Constructing Meaning*

1. **Reading is thinking**. Well-written materials model good thinking.
2. Foundation for **expressive writing**
3. Thoughtful readers become **thoughtful problem solvers** and better students.

Brad - high school senior

"I don't look at a book as a whole bunch of words… I look at it as **someone's thinking** and the **information** the **author wants me to know**."

From: Do I Really Have to Teach Reading?
~ Cris Tovani

The single highest failure rate in high school is Algebra I

"After pregnancy, it's the leading indicator of high school dropout.

The leading indicator of success in Algebra I is English 8.

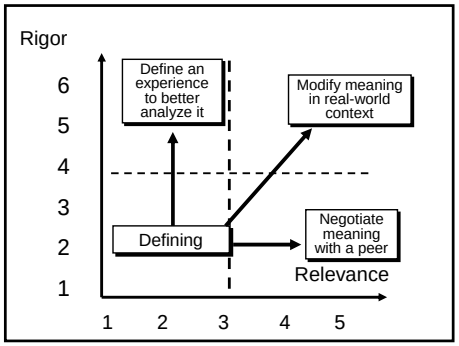
The Algebra 1 test is a reading test with numbers"

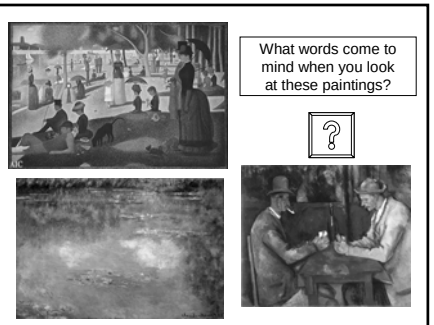
~ Doug Reeves, *District Administrator* April '05

Strategy #1 : Defining

Reflecting on defining skills

- What defining **skills do we teach**?
- What **strategies do we use**?
- What **strategies are working**?





The relationship between vocabulary and academic achievement is well established ~ Marzano, *What Works in Schools*

- Students with **large vocabularies** have **more background knowledge**
- Some students come to us from **home environments that are not academically rich**
- Vocabulary can be taught:
  - **Wide reading**: more engaging, but may lack sufficient word exposure
  - **Direct instruction**: should be student-centered rather than rote-memorization

Strategies for teaching defining skills

1. ***Connect*** new vocabulary with prior knowledge
2. Clearly ***organize*** new vocabulary
3. Give students a chance to more ***deeply process*** vocabulary to internalize meaning
   - Generate / compare **their own explanations** of terms
   - Ask them to create their own **non-linguistic models** of terms

Can combine teacher-directed and student-directed approaches

1. Build associations with background knowledge. **Connect** students with what they already know

- Have you ever heard the term ***equidistant***?
- What words do you see in ***equidistant***?
- What do you associate with ***equidistant***?

Let students generate preliminary definitions

Foster listening skills

1. Teacher asks a for a preliminary definition
2. Student #1 responds
3. Teacher asks student #2 to summarize or restate #1.
4. Teacher asks student #3 if the summary is correct
5. Can even go back to #1 for a rebuttal

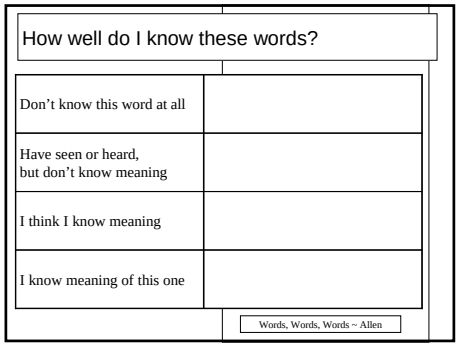
All students must listen and be ready to respond

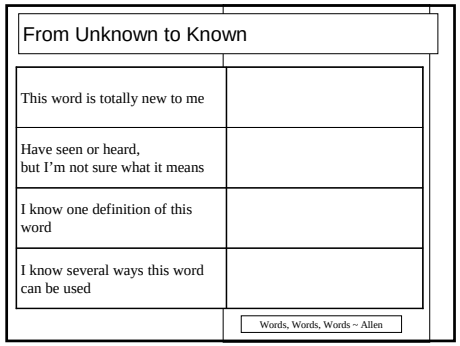
Pre - reading: Let students work together to compare preliminary definitions. (Visual, auditory and text-based definitions)

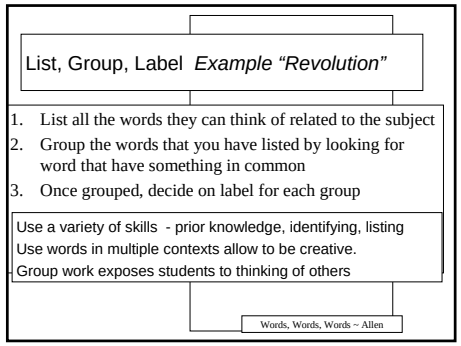
- Students develop their own definition
- Compare to peer definition
- Similarities
- Differences

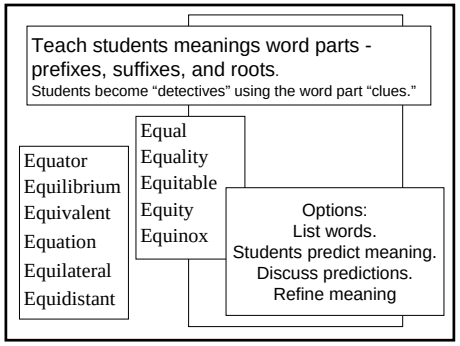
Use a visual organizer to map out and preview text

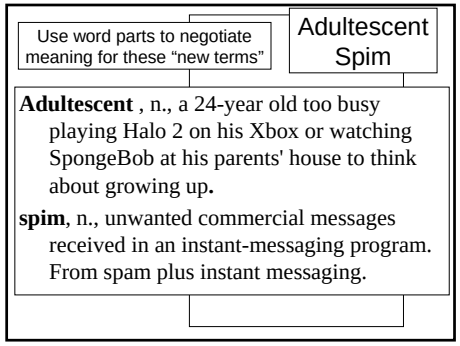
Reading for Academic Success ~ Strong and Silver

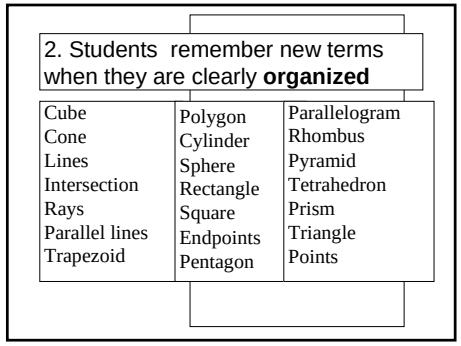

How well do I know these words?
Don't know this word at all
Have seen or heard, but don't know meaning
I think I know meaning
I know meaning of this one
Words, Words, Words ~ Allen

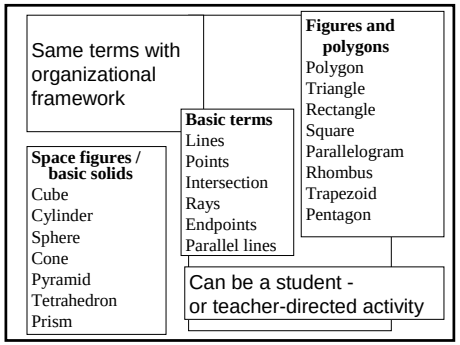

From Unknown to Known
This word is totally new to me
Have seen or heard, but I'm not sure what it means
I know one definition of this word
I know several ways this word can be used
Words, Words, Words ~ Allen

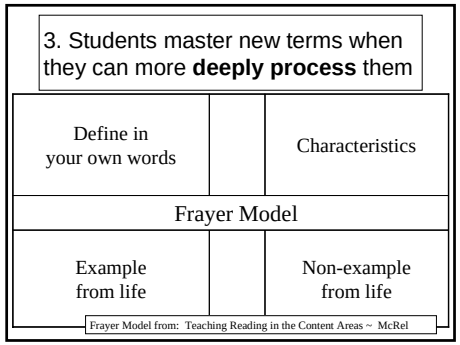

List, Group, Label Example "Revolution"
1. List all the words they can think of related to the subject
2. Group the words that you have listed by looking for word that have something in common
3. Once grouped, decide on label for each group
Use a variety of skills - prior knowledge, identifying, listing
Use words in multiple contexts allow to be creative.
Group work exposes students to thinking of others
Words, Words, Words ~ Allen

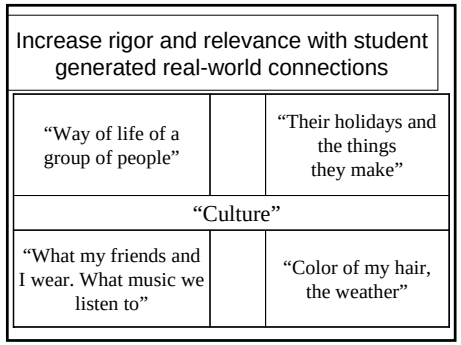

Teach students meanings word parts - prefixes, suffixes, and roots.
Students become "detectives" using the word part "clues."
Equator
Equilibrium
Equivalent
Equation
Equilateral
Equidistant
Equal
Equality
Equitable
Equity
Equinox
Options:
List words.
Students predict meaning.
Discuss predictions.
Refine meaning

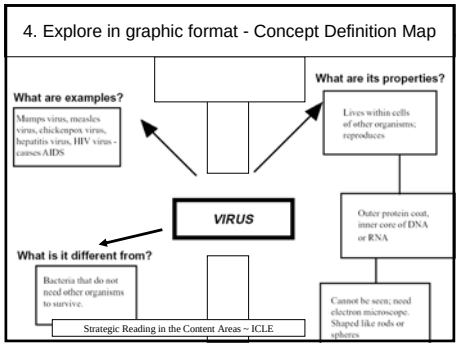

Use word parts to negotiate meaning for these "new terms"
Adultescent Spim
Adultescent , n., a 24-year old too busy playing Halo 2 on his Xbox or watching SpongeBob at his parents' house to think about growing up.
spim, n., unwanted commercial messages received in an instant-messaging program. From spam plus instant messaging.

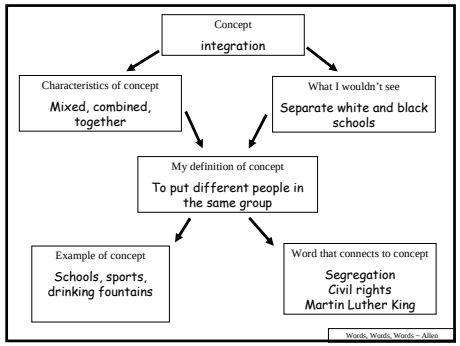

2. Students remember new terms when they are clearly organized
Cube
Cone
Lines
Intersection
Rays
Parallel lines
Trapezoid
Polygon
Cylinder
Sphere
Rectangle
Square
Endpoints
Pentagon
Parallelogram
Rhombus
Pyramid
Tetrahedron
Prism
Triangle
Points

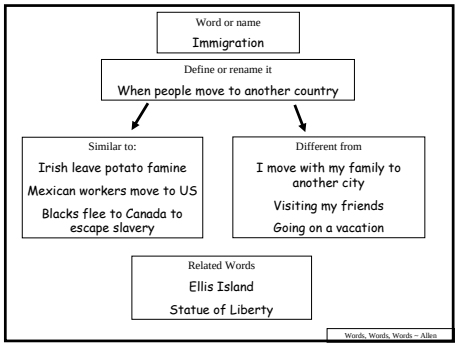

Same terms with organizational framework
Space figures / basic solids
Cube
Cylinder
Sphere
Cone
Pyramid
Tetrahedron
Prism
Basic terms
Lines
Points
Intersection
Rays
Endpoints
Parallel lines
Figures and polygons
Polygon
Triangle
Rectangle
Square
Parallelogram
Rhombus
Trapezoid
Pentagon
Can be a student - or teacher-directed activity

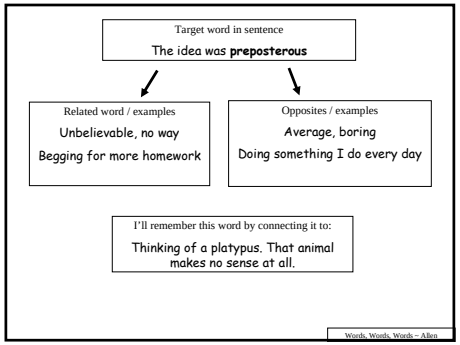

3. Students master new terms when they can more deeply process them
Define in your own words
Characteristics
Frayer Model
Example from life
Non-example from life
Frayer Model from: Teaching Reading in the Content Areas ~ McRel

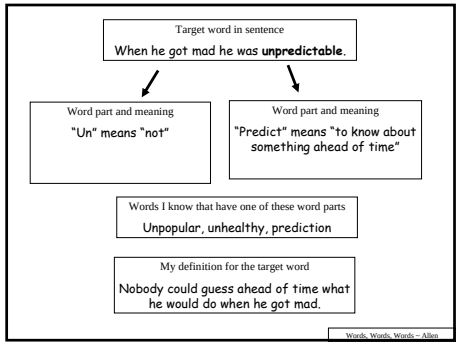

Increase rigor and relevance with student generated real-world connections
"Way of life of a group of people"
"Their holidays and the things they make"
"Culture"
"What my friends and I wear. What music we listen to"
"Color of my hair, the weather"

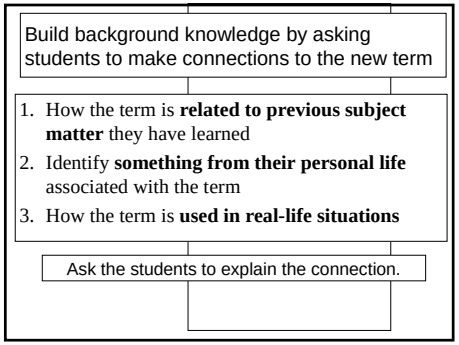

4. Explore in graphic format - Concept Definition Map
What are examples?
Mumps virus, measles virus, chickenpox virus, hepatitis virus, HIV virus - causes AIDS
What are its properties?
Lives within cells of other organisms; reproduces
VIRUS
Outer protein coat, inner core of DNA or RNA
What is it different from?
Bacteria that do not need other organisms to survive.
Cannot be seen; need electron microscope. Shaped like rods or spheres
Strategic Reading in the Content Areas ~ ICLE

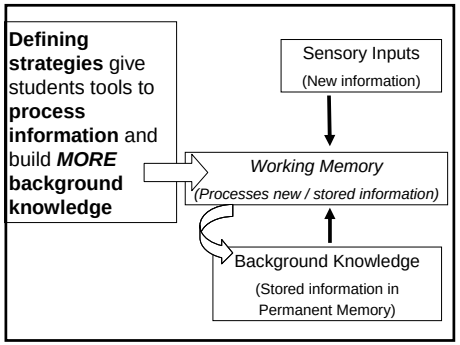

Concept
integration
Characteristics of concept
Mixed, combined, together
What I wouldn't see
Separate white and black schools
My definition of concept
To put different people in the same group
Example of concept
Schools, sports, drinking fountains
Word that connects to concept
Segregation
Civil rights
Martin Luther King
Words, Words, Words ~ Allen

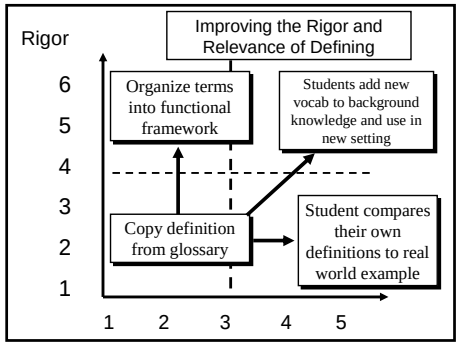

Word or name
Immigration
Define or rename it
When people move to another country
Similar to:
Irish leave potato famine
Mexican workers move to US
Blacks flee to Canada to escape slavery
Different from
I move with my family to another city
Visiting my friends
Going on a vacation
Related Words
Ellis Island
Statue of Liberty
Words, Words, Words ~ Allen

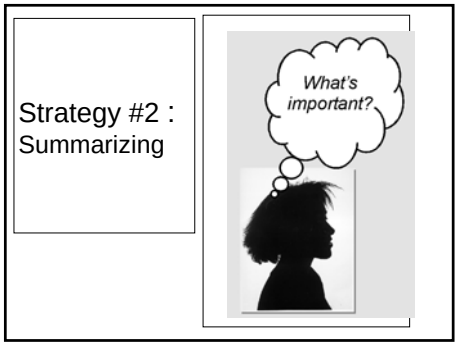

Target word in sentence
The idea was preposterous
Related word / examples
Unbelievable, no way
Begging for more homework
Opposites / examples
Average, boring
Doing something I do every day
I'll remember this word by connecting it to:
Thinking of a platypus. That animal makes no sense at all.
Words, Words, Words ~ Allen


Target word in sentence
When he got mad he was unpredictable.
Word part and meaning
"Un" means "not"
Word part and meaning
"Predict" means "to know about something ahead of time"
Words I know that have one of these word parts
Unpopular, unhealthy, prediction
My definition for the target word
Nobody could guess ahead of time what he would do when he got mad.
Words, Words, Words ~ Allen


Build background knowledge by asking students to make connections to the new term
1. How the term is related to previous subject matter they have learned
2. Identify something from their personal life associated with the term
3. How the term is used in real-life situations
Ask the students to explain the connection.


Defining strategies give students tools to process information and build MORE background knowledge
Sensory Inputs
(New information)
Working Memory
(Processes new / stored information)
Background Knowledge
(Stored information in Permanent Memory)


Rigor
Improving the Rigor and Relevance of Defining
6
5
4
3
2
1
Organize terms into functional framework
Students add new vocab to background knowledge and use in new setting
Copy definition from glossary
Student compares their own definitions to real world example
1
2
3
4
5


Strategy #2 : Summarizing
What's important?

Reflecting on summarizing skills

- What summarizing **skills do I teach**?
- What **strategies do I use**?
- What **strategies are working**?

Student who use summarizing activities build background knowledge

- Student can **"talk" their way into learning**
- Retelling to **constructing their own meaning**
- Use **textual evidence** to support summaries
- Make and check **predictions**
- Using **graphic organizers**

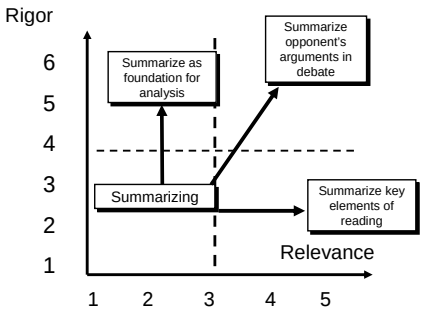
Research shows student use of summarizing skills results in a 34-percentile gain in student performance.

Classroom Instruction that Works, ASCD, 2001

Case 1:
Teacher lectures on the essential characteristics of mammals

+ 34% gain in content mastery

Case 2:
Teacher lectures and then students do a summarizing exercise on the essential characteristics of mammals



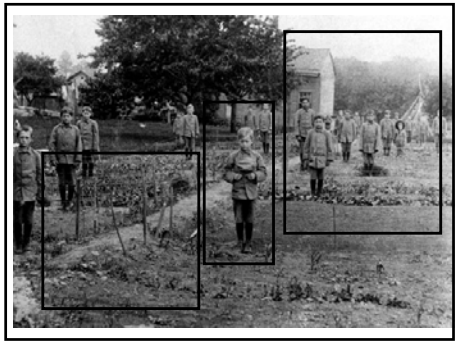
Build Summarizing Techniques with Visuals

Specify your student outcome

Given an image students will be able to demonstrate an ability to **interpret** a visual document by clearly **identifying** the **people**, **objects**, and **activities** in the image.

Start with Observation: Inventory the Image

- Study the image for 2 minutes. Form an overall impression of the image and then examine individual items.
- Next, divide the image into sections and study each to see what new details become visible.
- List people, objects, and activities in the image.



Increase rigor with inference - Based on what you have observed, list three things you might infer from this image.

What questions does this image raise?
Where could you find answers to them?

Gather and organize student observations with "post-its"

Differentiate the objective for different ability levels

Using the visual document supplied by the teacher
- Identify - **comprehension**
- Classify - **analysis**
- Draw your version - **synthesis**
- Judge based on criteria - **evaluation**

Different levels of Bloom's rigor

Start with basic text summarizing skills – delete, substitute, and keep

1. Focus on the **important information**.
2. **Delete trivial** info that is unnecessary to understanding
3. **Delete redundant** information
4. Use **category terms** for lists ("flowers" for "daisies, tulips and roses")
5. Select a **topic sentence** (or invent one if it is missing)

Classroom Instruction that Works, ASCD

Teach and model *active listening* and *reading* as foundation for summarizing

Getting the **spoken message** right
- *"So what your saying is…"*
- *"So what I'm hearing is …"*

Leads to getting the **written message** right
- *"So what the author is saying is ..."*
- *"Do you agree with the author's point that …"*

Effective questioners are also careful listeners

- **Clarifying** - restate an idea in another way.

"What do you mean, when you say _____?
- **Verifying** - provide evidence or examples

"How do you know ____ ?"
- **Refocusing** - get students "back on track"

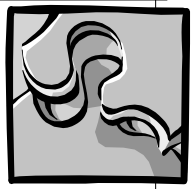
"You seem to be talking about (something else), what do you think about (current topic)?"
- **Narrowing the focus** to limit the idea talked about.

"Tell us more about that idea."

Improving Comprehension, Jill Slack, SEDL Letter, June 2005

Build background knowledge with a **Paired Reading**

1. Reader reads 1st paragraph to listener
2. Listener gives a summary
3. Check back to text for accuracy
4. Record summary
5. Switch roles



Strategic Reading in the Content Areas ~ ICLE

Modify Paired Reading into: **Peer Reading Coach**

- Select a reading - break into smaller sections
- Teacher develops two guiding question for each section
- Pair students up and have them alternate role of
  - **Coach ~ reads teacher's questions**
  - **Summarizer ~ uses questions to develop summary**
- Switch roles with each paragraph to summarize entire reading

Reading for Academic Success ~ Strong and Silver

Pose open-ended questions to help students build comprehension by developing their own interpretations

- What do you think the story will be about?
- What might you do in a similar situation?
- What does this remind you of in your own life?
- How might this be different if it happened in another time period?
- If you were telling this story, how might you end it?
- What do you think would happen if... ?

Improving Comprehension, Jill Slack, SEDL Letter, June 2005

Have student groups **negotiate a collaborative summary**

- Reading pairs develop summary
- Meet with additional groups to **negotiate** a collaborative summary
  - *My key ideas*
  - *My partner's key ideas*
  - *Our joint key ideas*
  - *Key ideas we agree on with another group*

Reading for Academic Success ~ Strong and Silver

Use a 4-2-1 Free Write to collaborate and reflect on a main idea

Student 1 Idea	Student 2 Idea	Student 3 Idea	Student 4 Idea

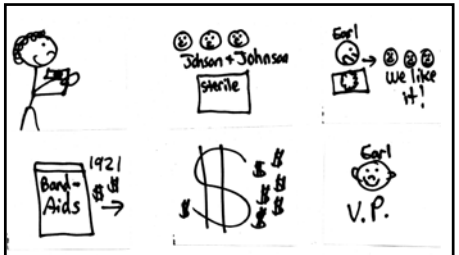
Pair A Central Idea | Pair B Central Idea

Group of Four: **Headline** One Big Idea

All 4 students do a free write "explaining" the big idea to someone who wasn't in the group

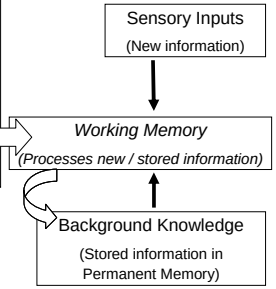
Reading for Academic Success ~ Strong and Silver, 2002

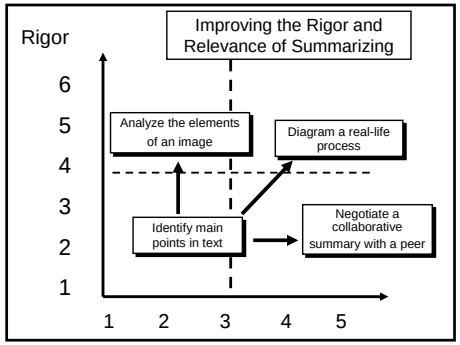
"Telling Board" Use, pictures, text, symbols to summarize and tell a story



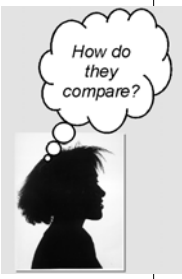
Big, bold, black, basic
Stop, sequence and summarize
Use a cue to retell to another

Summarizing strategies give students tools to **process information** and build ***MORE*** **background knowledge**





Strategy #3 : Comparing



Reflecting on comparing

- What **comparing skills do I teach**?
- What **strategies do I use**?
- What **strategies are working**?

Research shows student use of comparison skills results in a 45 - percentile gain in student performance.
Classroom Instruction that Works, ASCD, 2001

Case 1:
Teacher lectures on the essential characteristics of mammals

+ 45% gain in content mastery

Case 2:
Teacher lectures and then students do exercise comparing the essential characteristics of mammals to birds

Build background knowledge with visual comparisons

Observe and define
Summarize and compare
Pose questions

A one-hour introductory workshop by Peter Pappas
www.peterpappas.com

Use listening skills to make a comparison when people talk about the movies that saw

Listen to speaker	What ***type*** of film did they see?	Did they ***like*** the film?
Speaker 1		
Speaker 2		
Speaker 3		

"Yeah, it was sentimental story about a policeman who falls in love with a bank clerk who he meets after a robbery.
Predictable stuff - they move in together, split up, get back together. Bit boring, really, to tell you the truth."

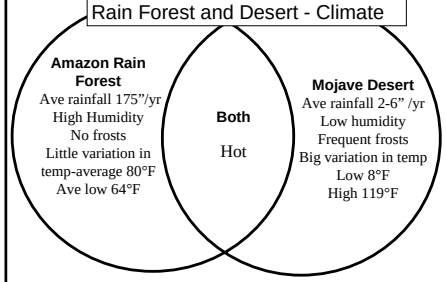
Student's listen to movie reviews

Graphic organizer comparison

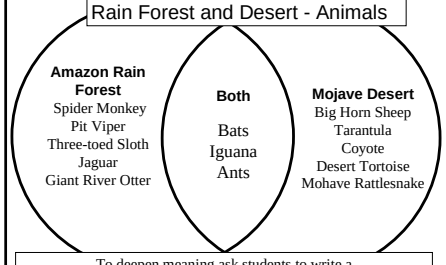
Amazon Rain Forest	Mohave Desert
Ave rainfall 175"/yr High Humidity No frosts Little variation in temp-average 80°F Ave low 64°F	Ave rainfall 2-6" /yr Low humidity Frequent frosts Big variation in temp Low 8°F High 119°F
Hot	
Spider Monkey Pit Viper Three-toed Sloth Jaguar Giant River Otter	Bats Iguana Ants
Bats Iguana Ants	Big Horn Sheep Tarantula Coyote Desert Tortoise Mohave Rattlesnake

Classroom Instruction that Works, ASCD, 2001

Rain Forest and Desert - Climate



Rain Forest and Desert - Animals



To deepen meaning ask students to write a **compound sentence** comparing two regions using **"and"** or **"but"**

Reading For Meaning - Students given an article on Relocation of the Cherokee Nation

Teacher produced statement:
For the Cherokees, moving west of the Mississippi is better than being oppressed in Georgia

☐ Support	☐ Disagree

Reading for Academic Success ~ Strong and Silver

Reading For Meaning - Students given an article on Relocation of the Cherokee Nation

Teacher produced statement:
For the Cherokees, moving west of the Mississippi is better than being oppressed in Georgia

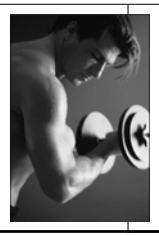
☐ Support	☒ Disagree
	"We wish to remain in the land of our fathers." If we are forced to leave our country, we see nothing but ruin before us"

Comparing what was stated

Ask students to develop their own models to do comparisons

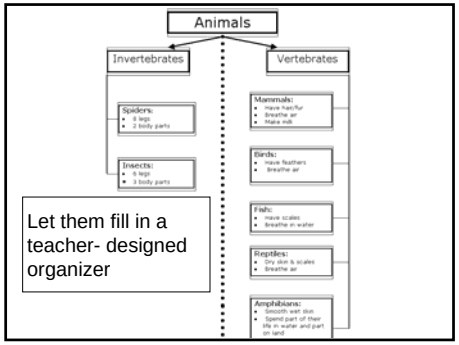
1. They could **select items to compare** from a teacher-produced list.
2. They could independently decide **what to compare**.
3. Can include some combination of **selecting both the items and / or characteristics**.

Let them make it relevant
What's more important in sports – strength or agility?



Move from Comparing to Classifying

1. **Comparing** is the process of **identifying similarities and differences** between or among things or ideas (technically contrasting is looking for differences.)
2. **Classifying** is the process of **grouping thing** that are **alike into categories** on the basis of the **characteristics**



Let them fill in a teacher- designed organizer

Let them design their own "system"

Look at leaves … how would you classify them?

Veins are parallel.

Stem is hollow – *Grass*

Stem is not hollow

Stem is round – *Rush*

Stem has edges – *Sedge*

Veins are not parallel.

Leaves are compound)

Three leaflets - *Poison Ivy*

Four or more leaflets

Leaves are not compound

Practice by classifying physical objects

"Post it" classification strategy. Give students a reading. They each write key info from reading on sticky notes. They then work in groups to *silently* classify the info.

Increase rigor of classification – add evaluation and decision-making

Decision	Criteria for evaluation		
	Criteria 1	Criteria 2	Criteria 3
Option 1			
Option 2			
Option 3			

Choose a career	Criteria for evaluating careers		
	Pay	Hours	Promotion
Construction			
Retail			
Health service			

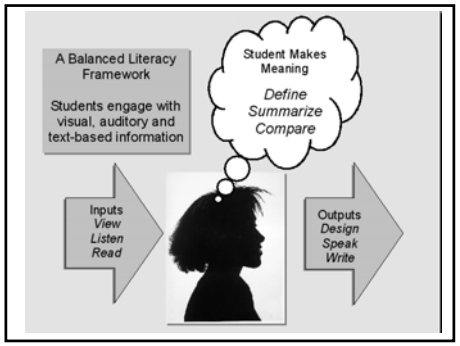
What criteria will you use?
Are they of equal importance?
How can your evaluations be quantified?
How can you use your analysis to justify a decision?

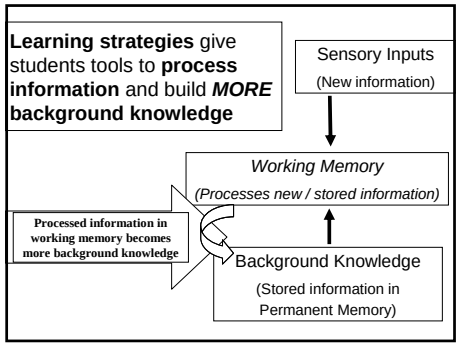
Measure classification: ***What types of stories are found in magazines?***

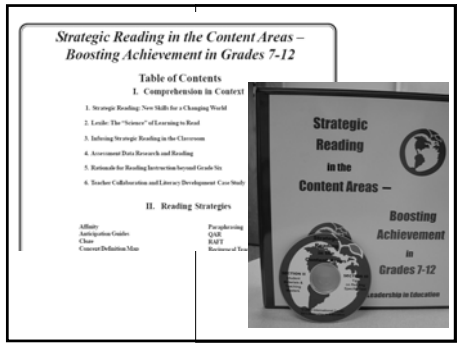
- What categories?
- Frequency of categories?
- Length of story?
- Illustrations?
- Cover story?

Teach students to observe

- What do you see – what do you call it?
  ~ ***vocabulary***
- What are the important details?
  ~ ***Summarizing***
- What patterns do you see?
  ~ ***Comparison***







Workshop References

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~ LaRocco, Sessoms ICLE 2003

Summarization in Any Subject
~ Rick Wormeli ASCD 2005

Words, Words, Words
~ Janet Allen Stenhouse 1999

Classroom Instruction that Works
~ Marzano, Pickering Pollock, ASCD 2001

Reading for Academic Success
~ Strong and Silver Corwin Press 2002

Critical Strategies for Academic Thinking and Writing
~ Mike Rose, Malcolm Kiniry Bedford 1998

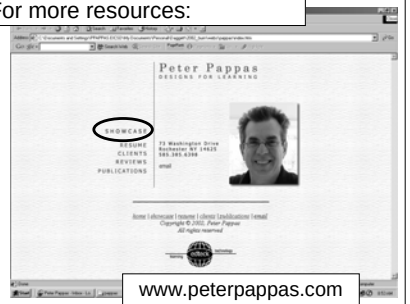
Do I Really Have to Teach Reading?
~ Cris Tovani Stenhouse 2004

Teaching Reading Strategies in Social Studies, Science and Math
~Laura Robb Scholastic 2003

Teaching Reading in the Content Areas
~ Jane Doty McRel 2003

Building Background Knowledge
~ Bob Marzano ASCD 2004

For more resources:



www.peterpappas.com

Content Reading Strategies Workshops:
Tailored to your training needs

June 2005
Winnfield Louisiana

A one-hour introductory workshop by Peter Pappas
www.peterpappas.com