


Rigor, Relevance and Reading for High Performing Students

Strategies for Rigor, Relevance and Reading


For High Performing Students

~ Peter Pappas Senior Consultant ICLE



Suggested Resources from the ICLE

1. Strategic Writing Across the Curriculum 7 - 12
2. Strategic Reading in the Content Areas 7 - 12
3. Leading with Reading in Grades 7 - 12



www.peterpappas.com

Peter Pappas
DESIGNS FOR LEARNING

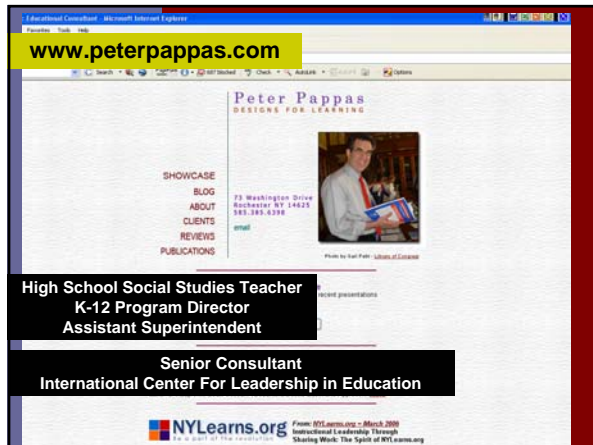
SHOWCASE
BLOG
ABOUT
CLIENTS
REVIEWS
PUBLICATIONS

High School Social Studies Teacher
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NYLearns.org
Part of the ICLE

From 9/11.com (pg. 1) March 2001
International Leadership Through
Sharing Work: The Spirit of NY Learning



My conference workshops



#79 Monday: The Power of Publishing – Academic Success for Struggling Readers and Writers

#76 Tuesday: Rigor, Relevance and Reading for High Performing Students

#82 Wednesday: 9th Grade Academy – A Small Learning Community That Works

Copy / Paste by Peter Pappas
Credits go to reestablishing responsibility for learning to the students.

Search Engine:

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Recent Posts

- Model Schools Conference Updates
- Read > Think > Write > Publish - The Power of Student Publishing
- Teaching American History (and... "Student as Historian")

Categories

- Commentary
- Lessons
- Presentations Notes

Links

- My Project Showcase
- About Peter Pappas

Model Schools Conference Updates
June 24, 2006

Greetings from the ICLE Model Schools Conference in Orlando. Just finished my preconference presentation - *Shedding High School - A Focus on Instruction*. I used a Turning Point audience response system to gather data from over 500 attendees in the session. Here's an updated version of the PowerPoint which includes the responder data. [Download pre-con-ables.pdf](#) 1.4MB pdf (visit to know more about TurningPoint response systems? Contact Mike Venouse at mvenouse@turningpointtechnologies.com Tell him you saw the system in my session at Model Schools.

The Power of Publishing - Academic Success for Struggling Readers and Writers
This workshop will showcase examples of successful programs that have motivated struggling readers and writers. The power of publishing enables students to think like writers, to apply their learning strategies and to organize and express their learning. Tips for funding to incorporate the publishing workshop into your academic intervention program make this a viable and cost-effective solution for any district. Participants will also learn simple technology tips that produce great results. [Download Publishing success handbook.pdf](#)

Stop back for more conference updates...

June 24, 2006 in [Presentation Notes](#) (7) [Feedback](#) | [Comments \(0\)](#)


June 17, 2006

Read > Think > Write > Publish - The Power of Student Publishing

Taught at two of Newsweek's 100 Best High Schools in America


Panelist and Mentor, National Endowment for the Humanities "Younger Scholars" Program

Reviewer, "National Programs of Excellence" National Council for the Social Studies



Rigor, Relevance and Reading for High Performing Students

New technologies have put students in charge of the information they access, store, analyze and share.



Flow of digital information is both personal and collaborative

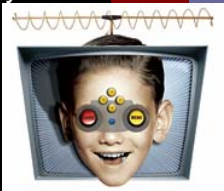


Students can become their own researcher, editor, and entertainment director. And join new digital communities – linking them to the people who share their interests.

Schools function as if they still controlled the flow of information

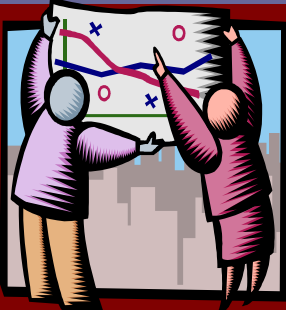


Literacy in the 21st century will mean the ability to find information, decode it, critically evaluate it, organize it into personal digital libraries and find meaningful ways to share it with others.



Information is a raw material – students will need to learn to build with it

Rigor, Relevance, and Learning Strategies



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

Bloom's different levels of rigor

Evaluation: appraise, defend, predict

Synthesis: compose, design, develop

Analysis: compare, contrast, categorize

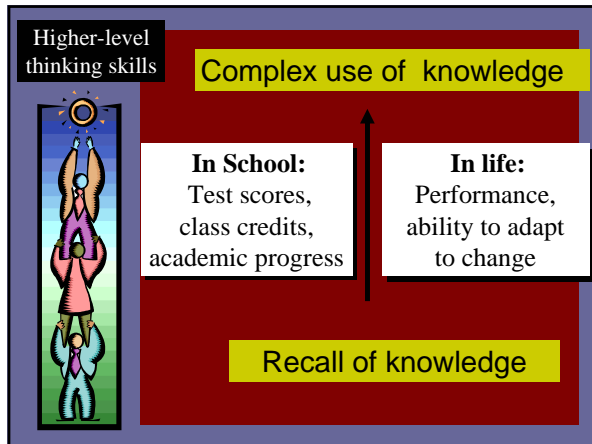
----- Basic Skills -----

Application: demonstrate, illustrate, solve

Comprehension: describe, explain

Knowledge: memorize, name, recognize, recall

Rigor, Relevance and Reading for High Performing Students

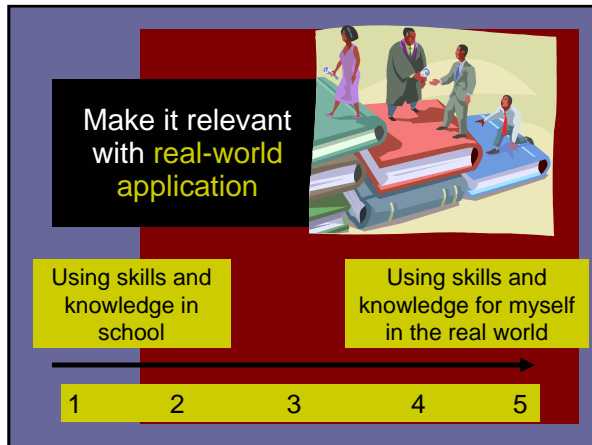


“I could **memorize very easily**, and became **valedictorian**.

But I was **embarrassed that I understood much less** than some other students who cared less about grades.

I felt that **my brain was a way station for material** going in one ear and (after the test) out the other.”

~ HS Student quoted in Wiggins and McTighe *Understanding by Design*

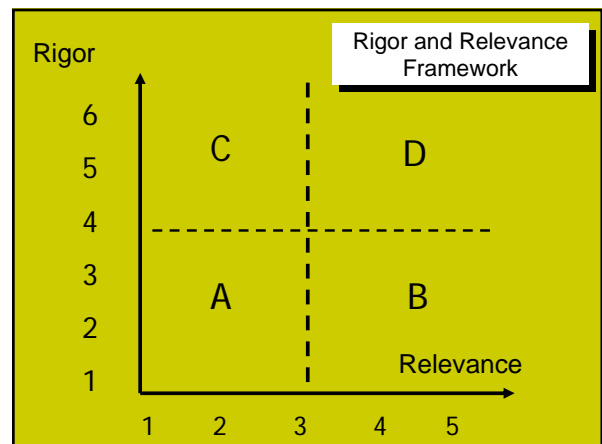


Put students in charge of their learning

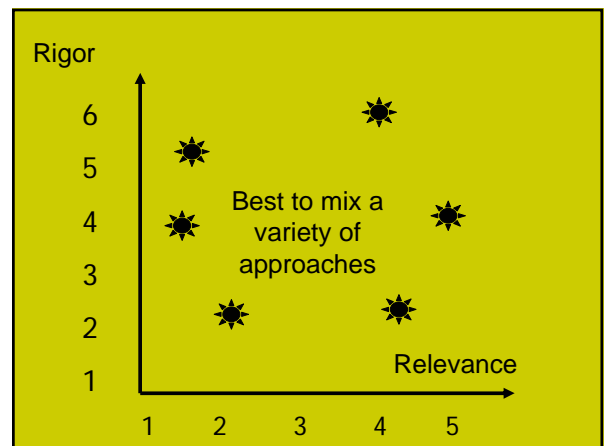
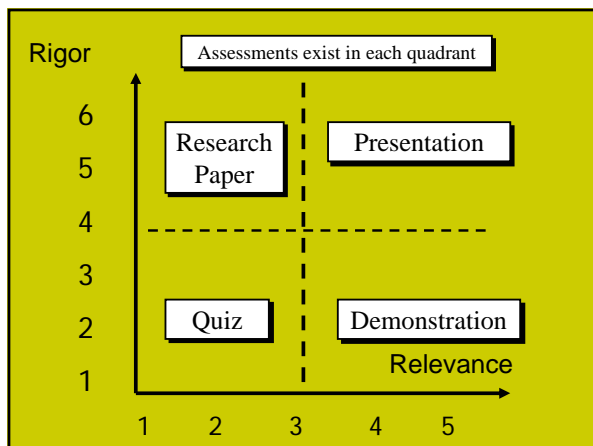
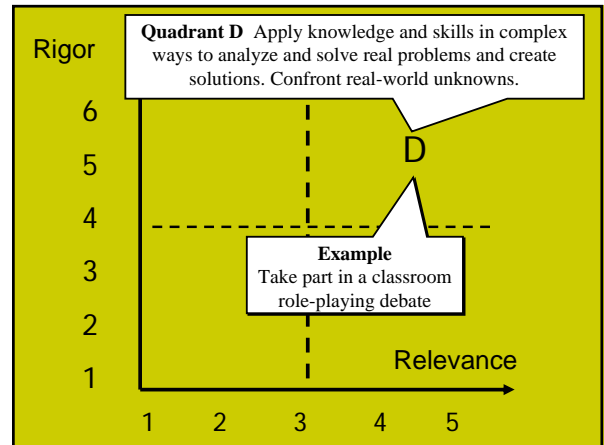
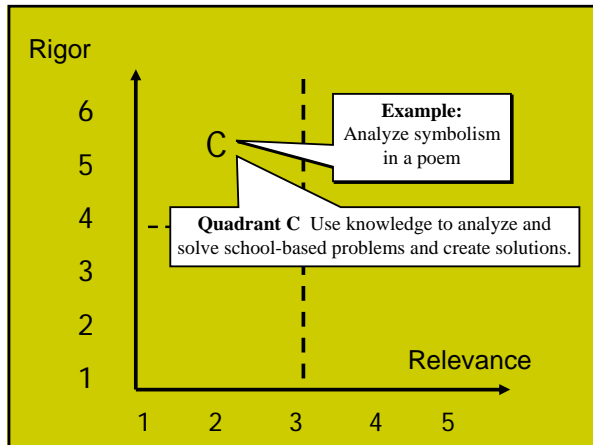
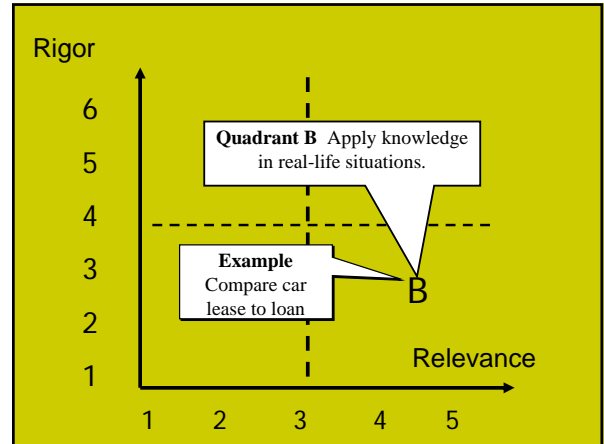
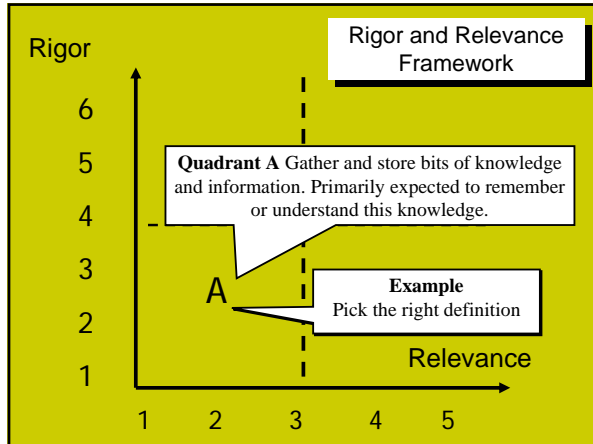
- **What am I learning today?**
- **Why am I learning it?**
- **How can I use** this knowledge and these skills to make a difference in my life?
- How can I **work** with teachers and other students to **improve my learning?**

Goal – students who can function in an academic or real-world setting that is unpredictable and vital

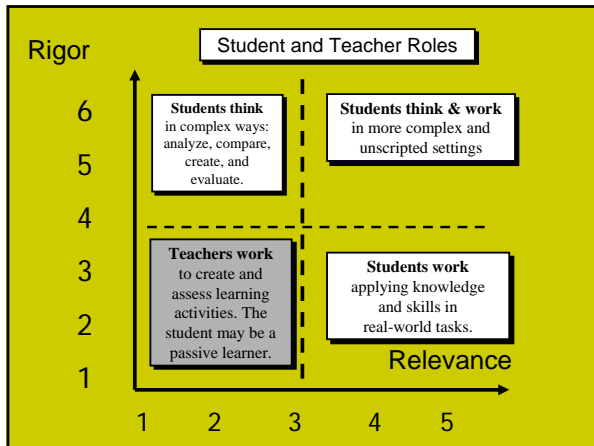
Learn to research, think, problem-solve and write like a **scientist, engineer, coach, artist, historian, mathematician, writer, musician,**



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Robert Marzano:
What Works in Schools

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

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

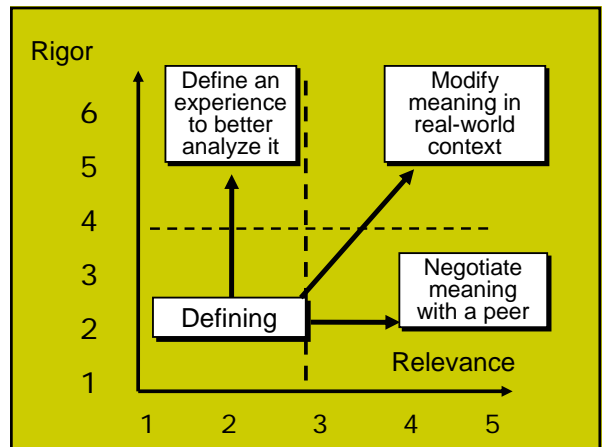
Instructional strategies that work

We'll focus on three strategies

- 1. Defining:** negotiating meaning
- 2. Summarizing:** synthesis and judgment
- 3. Comparing / Classifying:** assessing similarities and differences

We'll use the Rigor and Relevance Model as a framework

Strategy #1:
Defining negotiating meaning



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The relationship between vocabulary and academic achievement is well established ~ Bob 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

If I were to do **one thing to raise test scores**, even on standardized tests, it would be to **build vocabulary**.

In *Chemistry*, students would write "Dilute the solution with **three milliliters of water**" rather than simply, "Add more water."

~ Heide Hayes Jacobs

Poor word choice



Does your school use common strategies when teaching defining?

Strategies for teaching defining skills

1. Connect new vocabulary with *prior knowledge*
 - What they **think they know**
 - Brainstorm **their own explanations** of terms
 - **Introduce with story, current event, image**
2. Give students a chance to more *deeply process* vocabulary to internalize meaning
 - Create their own **non-linguistic models** of terms
 - Activities that **explore, restate, discuss terms with peers**
 - Finalize with **reflection and revisions to vocabulary notebooks**

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

Rigor, Relevance and Reading for High Performing Students

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

Students **internalize** new vocabulary when they **explore** the words –

- Think about terms, examine and reexamine in new ways.
- Apply their understanding - opposites and analogies.
- Create multiple formats for which students can elaborate on the meaning of new terms.

Increase rigor and relevance with **non-linguistic definitions**
– Charades, role play, tableau

Let them use sketches to represent terms

Graphically represent "Symmetry" and "Asymmetry"

Remember a see-saw - Close to Center the heaviest... For Balance

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

Use consistent approaches across the curriculum

Definition: A whole number with exactly two divisors (factors)	Characteristics: • 2 is the only even prime number • 0 and 1 are not prime • Every whole number can be written as product of primes
"Prime Number"	
Examples: 2, 3, 5, 7, 11, 13 ...	Non-examples: 1, 4, 6, 8, 10, ...

Increase rigor and relevance with a personal vocabulary notebook

Term:
"My" definition:
Dictionary Definition:
Comparison:

Reading for Academic Success - Strong and Silver

Rigor, Relevance and Reading for High Performing Students

Reading: "Letters from a Birmingham Jail" Martin Luther King Jr

Term: Segregation

"My" definition: A time when African-Americans used to have separate schools

Dictionary Definition:

Comparison:

Term: Segregation

"My" definition: A time when African-Americans used to have separate schools

Dictionary Definition: The policy or practice of forcing racial groups to live apart from each other

Comparison:

Term: Segregation

"My" definition: A time when African-Americans used to have separate schools

Dictionary Definition: The policy or practice of forcing racial groups to live apart from each other


Comparison: I thought of segregate more as a time period, but the dictionary calls it a practice or policy

Be sure to consider the use of familiar terms in a specialized context

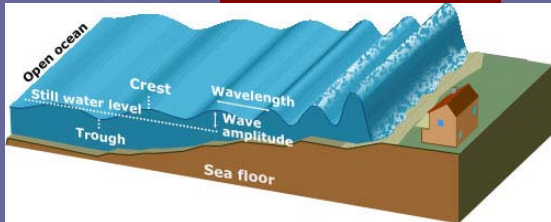
- Identify **key words** in passage
- Ask students to read the passage with **special attention to the context** in which the term is used
- Ask students to discuss **how the author has used the term** in this specific context
- Ask them to **refine** their **preliminary definition** of the word

Refining meaning in an academic discipline ...

"Model"



Model of how a tsunami develops



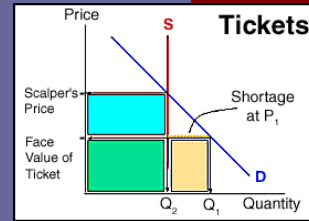
Rigor, Relevance and Reading for High Performing Students

“This **model** before us was a single molecule of hemoglobin of horse in its oxygen-carrying state. It was surprisingly large... within a cubical frame about four feet long.

He picked up a pointer to trace the twisting, swooping paths of the four chains in the **model**.

The red cords and white ones, he said, were **not the real structure but only aids to the eye.**”

— Horace Freeland Judson, *The Eighth Day of Creation: Makers of the Revolution in Biology*



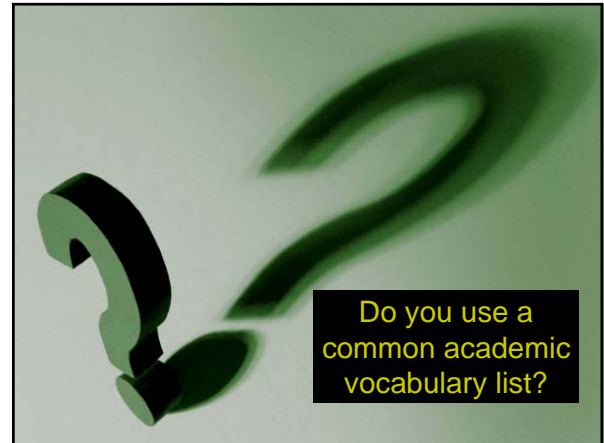
“The market **model** provide a base from which mathematical **models** can be constructed and refined.

— Michael H. Best, *The Politicized Economy*

How does it compare to the dictionary definition?

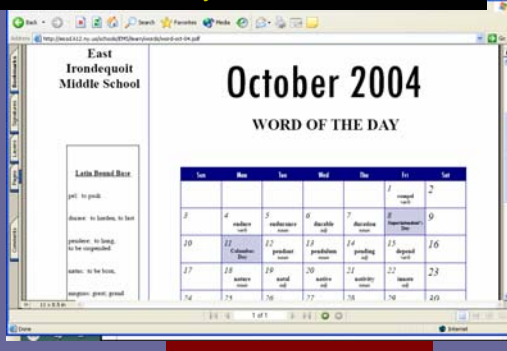
Model - n.

1. a standard or example for imitation or comparison.
2. a representation, generally in miniature, to show the structure or serve as a copy of something.
3. a person or thing that serves as a subject for an artist, sculptor, writer, etc.
4. a person, esp. an attractive young woman, whose profession is posing with, wearing, using, or demonstrating a product for purposes of display or advertising.
5. a pattern or mode of structure or formation.



Do you use a common academic vocabulary list?

Teamwork! Organize a school or department **academic vocabulary list**



Latin Bound Base	Mon	Tue	Wed	Thu	Fri	Sat
pel: to push						1
durare: to harden, to last	4 endure verb	5 endurance noun	6 durable adj	7 duration noun	8	Sup
pendere: to hang, to be suspended	11 Columbus Day	12 pendant noun	13 pendulum noun	14 pending adj	15	6
natus: to be born.	18 nature noun	19 natal adj	20 native adj	21 nativity noun	22	4
magnus: great, grand	25 magnificent adj	26 magnify verb	27 magnanimous adj	28 magnitude noun	29	m

Rigor, Relevance and Reading for High Performing Students

How can we work together across the disciplines to help our students master new vocabulary?

Math Vocabulary	Social Studies Vocabulary	Student writes a sentence using both terms
Median: The middle number in a set of numbers ordered from smallest to largest.	Demographic: Characteristics of the people of geographic region.	The demographics of the area show that the median age is 62, meaning that half the population is near retirement.

1. Given the "denominator" of each measure, write in the "numerator."
2. Then add or subtract, and simplify as fractions.

Math meets music

Teachers must monitor accuracy of student work

1. Use introductory activities as a chance to "pre-test" their understanding
2. Circulate to check work and vocabulary notebooks during group time
3. During review activities listen for misconceptions and areas of confusion. Clear them up!

Consider having students keep records of their own progress

Does your school use a common approach to track vocabulary progress?

Tracking Vocabulary Progress

Rubric Level	Description
4	I understand even more about the term than what I was taught. I know multiple meanings.
3	I understand the term and I'm not confused about any part of what it means.
2	I'm a little uncertain about what the term means, but I have a general idea.
1	I really don't understand what the term means.

My Understanding Rubric 4 | 3 | 2 | 1

Term: Segregation

"My" definition: A time when African-Americans used to have separate schools

Dictionary Definition: The policy or practice of forcing racial groups to live apart from each other

Comparison: I thought of segregation more as a time period, but the dictionary calls it a practice or policy

Rigor, Relevance and Reading for High Performing Students

Student Progress Chart Unit 3
 Student Name _____ Date _____

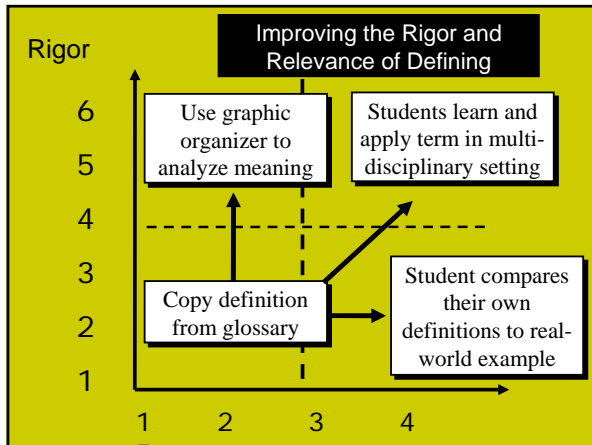
Rubric 4	X	X	X						
Rubric 3	X	X	X	X	X				
Rubric 2	X	X							
Rubric 1	X								

Building Academic Vocabulary - Bob Marzano

“Finalize” the mastery by asking students to **make connections to the new term**

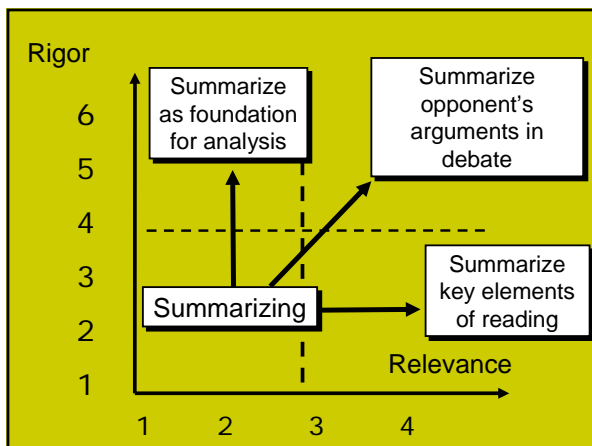
1. How the term is **related to previous subject matter** they have learned
2. Identify **something from their personal life** associated with the term
3. How the term is **used in real-life situations**
4. How their **understanding** of the term **has evolved**

An essential part of this elaboration process is having the students explain the connection.



Strategy #2: Summarizing synthesis and judgment

?



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 dictatorships	
Case 2: Teacher lectures and then students do a summarizing exercise on the essential characteristics of dictatorships	+ 34% gain in content mastery

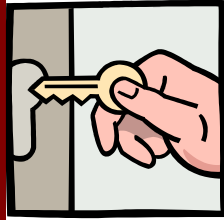
Rigor, Relevance and Reading for High Performing Students

If we expect our student to synthesize the essential information, do we help them set a purpose for their reading?

Think of purpose we set for our reading

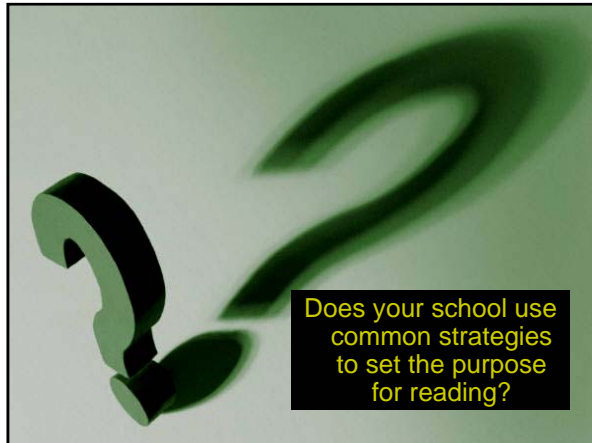
Students need to know what they should expect to learn

- Main points or details?
- Sequence of events?
- Author's viewpoint?
- Connections to previous learning?



Would your students benefit from standardized reading assignment form?

1. Specific passage and due date
2. Purpose – what should they know or be able to do? And pay special attention to:
3. New vocabulary that they will encounter
4. Text features – headings, bold face, images, data, graphs, footnotes
5. Reading tips – skim, make predictions, summarize, organize details, take notes



Model *active viewing, listening, and reading* as a foundation for summarizing

Getting the **visual message** right

"So what the artist is saying is..."

Getting the **spoken message** right

"So what you're saying is..."

Getting the **written message** right

"So what the author is saying is ..."

Visual, listening, and reading skills

- **Identify details** – can you identify key symbols, words, visual elements?
- **Recognizing context** – where is this taking place, time period, who's involved?
- **Identify relationships** – who are these people, what is their relationship to one another?

Visual, listening, and reading skills

- **Identify opinions** – is there a point of view expressed in the source information?
- **Infer meaning** – is there meaning that can be extracted from what's between the lines?
- **Make predictions** – based on the information, what will happen next?

The teacher **models strategies** then **transfers responsibility** to students working in small groups. Students learn to independently and flexibly **apply the strategies on their own.**

- **Summarizing** sums up the content, identifying the gist of what has been read and discussed.
- **Questioning** poses questions based on a portion of a text the group has read, either aloud or silently.
- **Clarifying** resolves confusions about words, phrases, or concepts, drawing on the text when possible.
- **Predicting** suggests what will next happen in text or be learned next from the text.

Increase relevance – 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*

Increase rigor - ask students to **work in teams** to form **predictions** from reading – **cite text evidence**

Reading for Academic Success – Strong and Silver

Open-ended questions to deepen understanding
... "What's going on here?
What do you see that makes you think so?"

- 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

Build Summarizing Techniques with
Visuals



Specify your student outcome

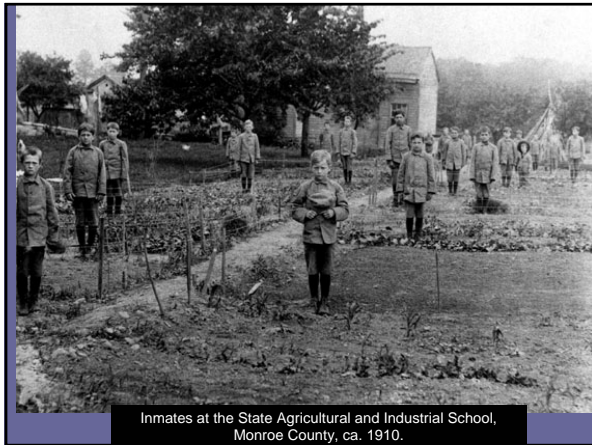
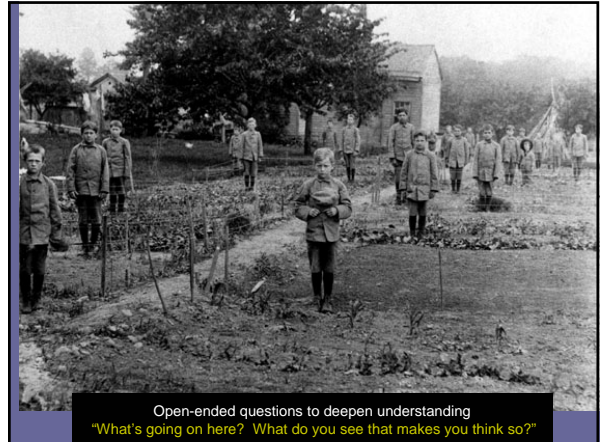
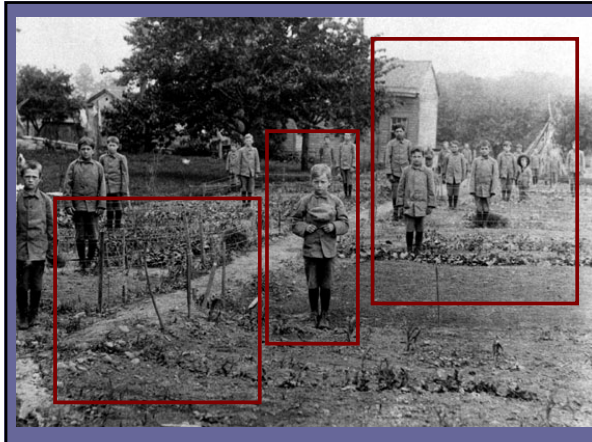
*Given an image students will be able to demonstrate an ability to **interpret** a visual document by clearly **identifying the people, objects, and activities** in the image.*

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.

Rigor, Relevance and Reading for High Performing Students




Make
 summarizing
 more rigorous
 and
 relevant with
Evaluation



Which photo
 would you use?
 What's in the images? What's left out?

?

"I approached the hungry and desperate mother, as if drawn by a magnet. I do not remember how I explained my presence ... she asked me no questions. ... I did not ask her name.

She told me that she was thirty-two. They had been living on vegetables from the surrounding fields, and birds that the children killed.

She seemed to know that my pictures might help her, and so she helped me. There was a sort of equality about it." Dorothea Lange

"Migrant Mother" 1936 Nipomo, California

Rigor, Relevance and Reading for High Performing Students

Support summarizing skills with technology

Why Does Studying Solar Wind Tell Us About the Origin of Our Solar System?
Example from Reading for Academic Success – Strong and Silver, 2002

Most scientists believe our solar system was formed 4.6 billion years ago with the gravitational collapse of the solar nebula, a cloud of interstellar gas, dust, and ice created from previous generations of stars. As time went on the grains of ice and dust bumped into and stuck to one another, eventually forming the planets, moons, comets, and asteroids as we know them today.

Tools / Track Changes / Highlight Changes

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Tools / Track Changes / Highlight Changes

Add Reading Level to Spell Check
Tools / Options / Show readability statistics

Readability Statistics

Counts	
Words	618
Characters	3126
Paragraphs	12
Sentences	31
Averages	
Sentences per Paragraph	3.4
Words per Sentence	19.1
Characters per Word	4.8
Readability	
Passive Sentences	9%
Flesch Reading Ease	50.7
Flesch-Kincaid Grade Level	10.9

Grammar

- Check grammar as you type
- Hide grammatical errors in this document
- Check grammar with spelling
- Show readability statistics

Writing a summary matched to text structure

Recognizing how a piece of writing is organized helps to summarize it

Students may need to first map out the main points in a rough outline so that they can see the relationships

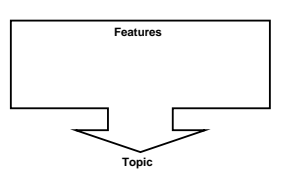
Critical Strategies for Academic Thinking and Writing by Mike Rose, Malcolm Kintiry



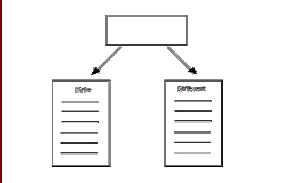
Pattern	Description	Cue Words
Description	Describes a topic by listing characteristics, features, and examples	for example, characteristics are
Comparison	Explains how two or more things are alike and/or how they are different.	different; in contrast; alike; same as; on the other hand
Cause and Effect	Lists one or more causes and the resulting effect or effects.	reasons why; if...then; as a result; therefore; because
Problem and Solution	States a problem and lists one or more solutions for the problem.	problem is; dilemma is; puzzle is solved; question... answer
Sequence	Lists items or events in numerical or chronological order.	first, second, third; next; then; finally

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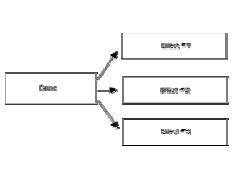
Description: listing characteristics, features, and examples



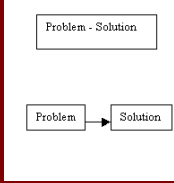
Comparison: how two or more things are alike or different



Cause and Effect: one or more causes and the resulting effect or effects

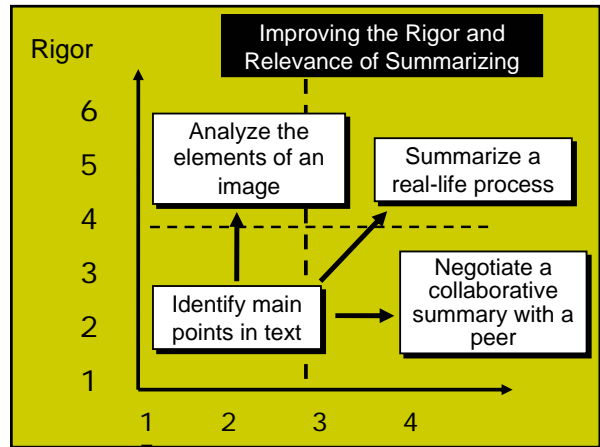


Problem and Solution: States a problem and lists one or more solutions for the problem



Remember to teach students to evaluate their own summaries

- Are the ideas in the **right sequence** / organization?
- Is it too **narrow or broad**?
- Would **someone else** reading my summary **understand** the subject?
- Does it convey the information **accurately and fairly**?
- Did my summary **suit my purpose**?
- Did I use **my own words and style**?



Strategy #3: Comparing / Classifying
assessing similarities and differences



Mastery of comparison skills is critical to academic achievement

- Central construct in academia
- Critical to comprehension

We need to prepare students to effectively address comparative tasks and generate their own models.

- Comparative literature
- Comparative religion
- Comparative anatomy
- “Contrast the function of pores in humans and stomata in plants.”
- “Compare the nautical elements in the fiction of London and Conrad”

Rigor, Relevance and Reading for High Performing Students

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

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

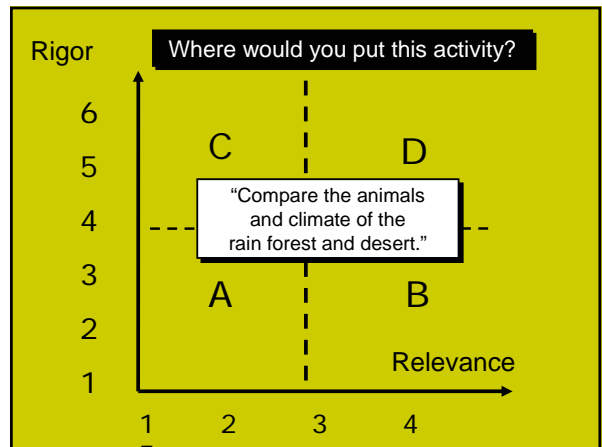
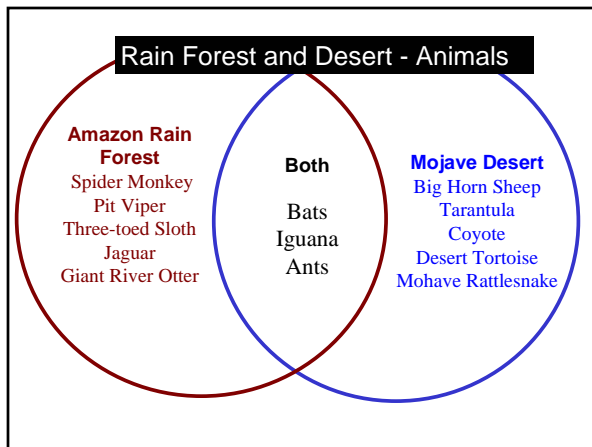
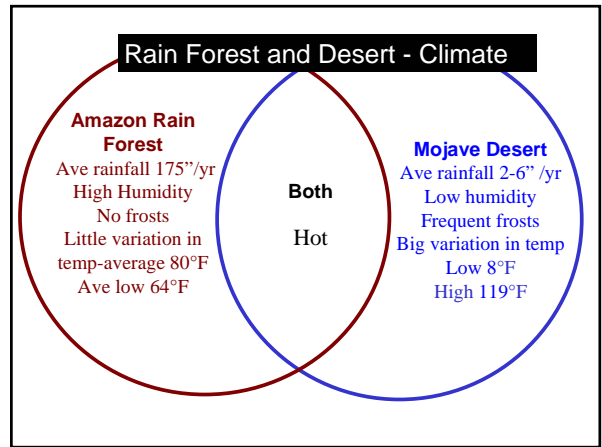
+ 45% gain in content mastery

Comparison is essential to comprehension

"Compare the animals and climate of the rain forest and desert."

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

Classroom Instruction that Works, ASCD



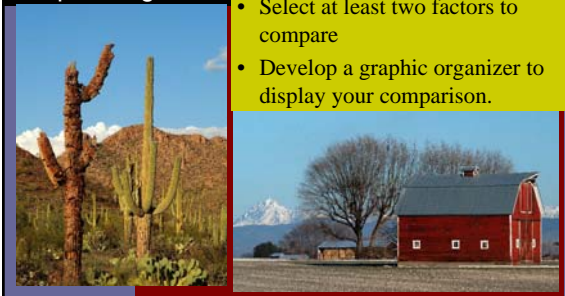
But who is doing the thinking in this exercise?
"Compare the animals and climate of the rain forest and desert."

1. Did students select **the information** and **decide on the categories?**
2. Did they **design the graphic organizer?**
3. Is it **really an exercise in memorizing and repeating** the appropriate (complex) information that others have told the student?

What's the point of the comparison?
 What does it enable us to do or see?

How would students independently compare regions?

- Select two geographic regions of the world
- Develop a model to compare the regions
- Select at least two factors to compare
- Develop a graphic organizer to display your comparison.



Do you give students an opportunity to develop their own analytic models for comparison?

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.**

- Of what use is the comparison
- What does it enable us to do or see?

Develop a comparative analysis of *What's more important in sports ... strength or agility?*

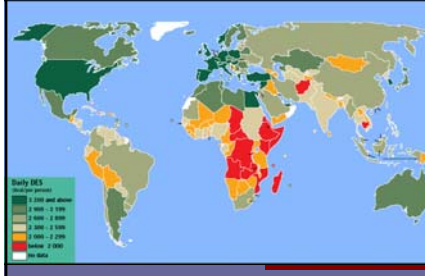
Add a peer review of research proposals



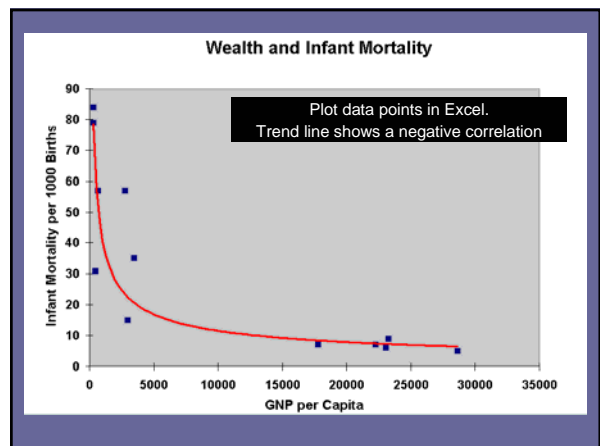
Conduct quantitative comparisons of real-world problems

What is the relationship between wealth and infant mortality?

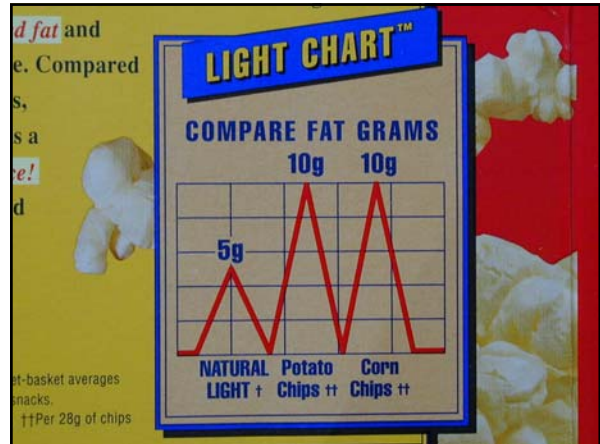
MAPPING NUTRITION AND MALNUTRITION
 Dietary Energy Supply (1994 - 1998)



Daily DES (kcal per person)
 2 500 and above
 2 000 - 2 500
 1 500 - 2 000
 1 000 - 1 500
 500 - 1 000
 100 - 500
 No Data



Do we teach students how to create effective visual displays of quantitative information?



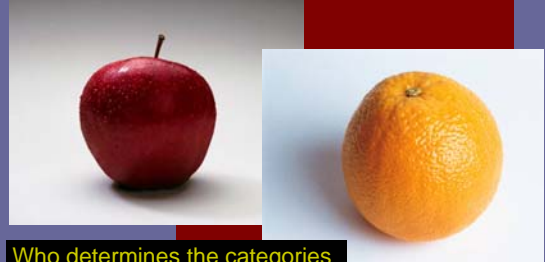
Move from Comparing to Classifying



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**

Comparison depends on classification.
The student may not be aware of the connection, because the teacher did the classifying in advance, leaving only the comparing for the student.

It's like comparing **apples** and **oranges**



Who determines the categories and "rules" for membership?

Can your students move from comparing to designing classifications systems?

- We typically ask students to **take someone else's classification system** and apply it.
- We rarely **ask students to generate a classification system of their own.**
- Creating categories gives them a chance to **assert their intellectual independence.**
 - Of what use is the classification system?
 - What does it enable us to do or see?

Look at leaves ... how would you classify them?



Student Designed System

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

Compare their classification system to the "established" system

Veins are parallel.
 Stem is hollow – *Grass*
 Stem is not hollow
 Stem is round – *Rush*
 Stem has edges – *Sedge*

lanceolate
 length greater than width, broadest at the base, narrowing to the apex, lance-shaped
Fraxinus pennsylvanica

ovate
 more or less rounded at both ends and broadest below the middle, egg-shaped
Cornus florida

cordate
 more or less rounded at both ends and broadest above the middle, egg-shaped
Cercis canadensis

elliptical
 ellipse-shaped, narrow at each end, widest at the middle
Cotoneaster dammeri

elliptical
 ellipse-shaped, narrow at each end, widest at the middle
Nyssa sylvatica

oblong
 longer than wide, sides parallel, rectangular with rounded corners

Quantify classification with a content analysis of news reports on Global Warming

- How will you **categorize** your observations?
- How will you **organize** your team to gather and evaluate the information?
- How will you **record** and **present** your findings?

How will you quantify your observations?

- Time the **length** of news stories?
- Record the **frequency** of certain categories you develop?
- Just an announcer talking vs live footage of the event?
- **Order** of presentation in news program?

Rigor and relevance in practice: Student-designed classifying exercise

1. **What** do I want to classify?
2. What **things are alike** that I can put into a group?
3. **Does everything fit** into a group now?
4. Would it be better to **split up any of the groups** or put any groups **together**?

Constructing Meaning
 Define, Summarize, Compare

?

For more resources:

www.peterpappas.com

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 Instructional Leadership Through Sharing Work: The Spirit of NYLearns.org