Rigor, Relevancy and Literacy for High School Teachers

Peter Pappas

Peter Pappas
DESIGNS FOR LEARNING

SHOWCASE
BLOG
ABOUT
CLIENTS
REVIEWS
PUBLICATIONS

Writer / Trainer Consultant

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NYLearns.org

content reading strategies
THAT WORK

READ Think Write Publish!

small learning communities
THAT WORK

Some of my websites

Copy Paste
Dedicated to relinquishing responsibility for learning to the student

Go to:
peterpappas.blogs.com
for updated color handout
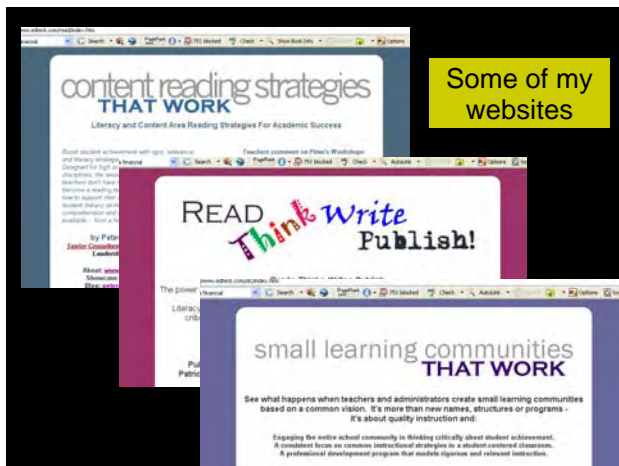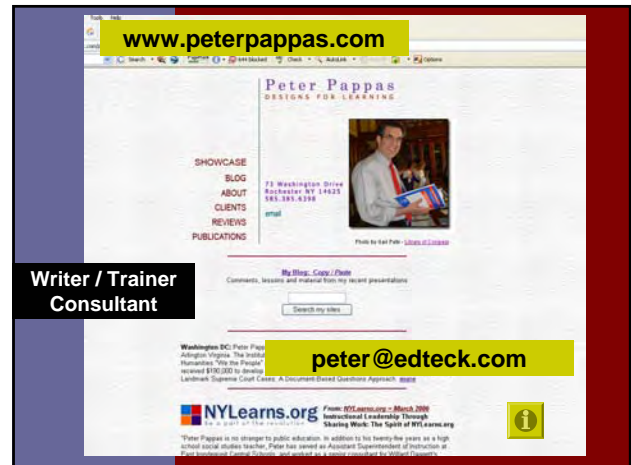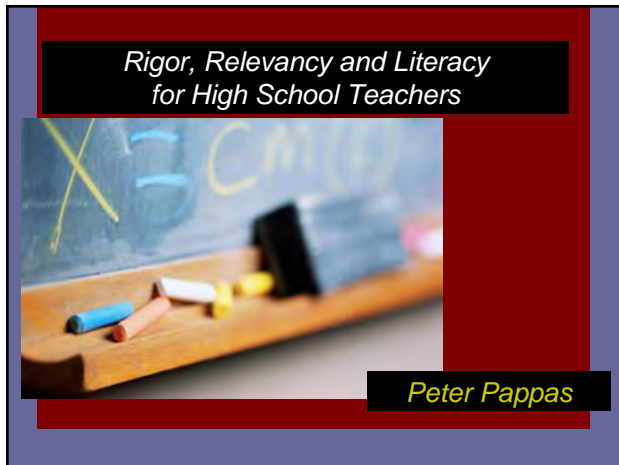
Essential questions:

1. What does rigor and relevance look like in the classroom? Does it extend to all students?

2. To what extent is learning student- or teacher-directed?

3. How can I help build literacy and still teach the Oregon Content Standards?

4. Rigor, relevance, and student-centered learning are good in theory, but how do we get past the challenges – lack of time, students who can't (or won't do) independent work, overcrowded curriculum, state tests, etc

1. Rigor, relevance and literacy
2. Defining
3. Summarizing
4. Comparing
5. Implications for the classroom

Agenda

Literacy - constructing meaning

A Report from Carnegie Corporation of New York

READING NEXT

A VISION FOR ACTION AND RESEARCH IN MIDDLE AND HIGH SCHOOL LITERACY

We'll focus on how you can use Reading Elements while teaching your subject standards

Reading Elements we'll address

1. Direct, explicit comprehension instruction	X
2. Effective instructional principles embedded in content	X
3. Motivation and self-directed learning	X
4. Text-based collaborative learning	X
5. Strategic tutoring	
6. Diverse texts of varying difficulty levels, topics, styles	
7. Intensive, integrated writing as a vehicle for learning	X
8. A technology component	X

Audience Response System courtesy of:

Mike Venrose

Turning Technologies

(330) 884-6044

mvenrose@turningtechnologies.com

Feather is to peacock as scale is to:

- 3%   **1. shark**
- 97%   **2. bass**
- 0%   **3. dolphin**
- 0%   **4. whale**

Brain is to processor as eyes are to:

- 4%   **1. hard drive**
- 4%   **2. mouse**
- 68%   **3. webcam**
- 25%   **4. monitor**

As a workshop participant, I could best be described as a:

- 34%   1. Sponge – I'll soak it up
- 31%   2. Pioneer – I'm quick to adopt new ideas
- 28%   3. Skeptic – Better convince me
- 3%   4. Vacationer – I'm treating this as a break
- 3%   5. Prisoner – They're making me go to this

When I go to a workshop, I like to:
You can pick 2

- **8%** 1. Focus on the theory of instruction
- **50%** 2. Get ideas I can use in my classroom
- **12%** 3. Interact with my peers
- **12%** 4. Be inspired
- **18%** 5. Reflect on my practice

Reading Between the Lines
What the ACT Reveals About College Readiness in Reading

ACT

Only 51 percent of 2005 ACT-tested high school graduates are ready for college-level .

More students are on track to being ready for college-level reading in 8th and 10th grade are actually ready by the time they reach 12th grade.

"Not enough high school teachers are teaching reading skills or strategies"

Overwhelmed by higher content standards, many . . . high school teachers feel under pressure to **"cover" more content** than ever before and are resistant to "adding" literacy responsibilities to their crowded course calendars. . . .

Since **literacy is not "visible" as a content area**, it is not "owned" by any specific department. The **English department**, it is wrongly assumed, **"takes care of that."**

Reading Between the Lines ~ ACT Report

We all rely on reading skills

Math
- Analyze statistical reports
- Solve word problems

Science
- Understand and use formulas
- Apply data from reading to practical problems

Health and Physical Education
- Read and apply procedures
- Read training manuals or play guides

Music
- Read music notations and interpret music symbols
- Evaluate and critique music

Vocational Studies
- Interpret recipes, training and assembly manuals
- Read charts, diagrams, pictures, drawings, and plans

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

Do I have to become a reading teacher?

1. Subject-area teachers **reinforce instruction strategies** that are effective in their subject areas
2. Students are encouraged to **read and write like subject-area experts**
3. Student achievement will improve - as their skills improve, they **become independent learners**

You can choose to support literacy skills while you teach your content

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Slide 1

NAEP assessment of 8th graders

Only 36% can proficiently:
- Understand beyond the literal level
- Make connections to personal experience and background knowledge
- Monitor their own comprehension and learning

Slide 2

for more strategies…
www.edteck.com/read

content reading strategies THAT WORK

Literacy and Content Area Reading Strategies For Academic Success

Boost student achievement with rigor, relevance and literacy strategies for academic success. Designed for high school teachers of all disciplines, the session will demonstrate that teachers don't have to sacrifice content or become a reading teacher. Teachers will find out how to support their subject area while building student literacy skills in mastering vocabulary, comprehension and analysis. Custom workshops available - from a few hours to a few days.

Teachers comment on Peter's Workshop

- "Informative and inspirational."
- "With the reminder of these strategies, I'm seeing how I can be a better teacher."
- "It's great to get new ideas that are directly related to practice and can be used right away."
- "Great examples and wonderful tools. Applicable to all disciplines."
- "After today's presentation, I'm thinking about changes that I want to make in my teaching strategies."
- "Helped me to think about Bloom's taxonomy in a real way – what is that I

by Peter Pappas email
Senior Consultant International Center for Leadership in Education

Slide 3

STRATEGIES FOR STRUGGLING READERS

Meet the "Word-Caller"

The "word-caller" reads orally with accuracy and fluency. Silent reading appears rapid, attentive and purposeful. These students can respond to "right-there" questions when they are allowed to reread but their responses are disorganized and tenuous; they cannot generalize, summarize, synthesize, analyze, infer or evaluate. They do not grasp the relationship of ideas or their importance or relevance. "Word Callers" need support to realize that reading is about constructing meaning and to develop and apply those tools.

The "word-caller" also:
Provides minimal written responses; their work lacks elaboration.
Seldom volunteers responses; or raises hand to answer but "forgets."
Performs poorly on tests that require comprehension or understanding.
Prefers group work for answers.
Exhibits poor comprehension skills; may read widely and frequently but without understanding.
Has limited language and vocabulary: does not grasp multiple meanings, connotative meanings, or figurative language.
Can decode words that are not in oral vocabulary.
Appears attentive when "reading" but disengages when response is required.

What the "word-caller" says about reading and themselves:

"I can read it, but I do not know what it says."
"I can read it, but I do not know the answers to these questions."
"I understand more when someone reads to me."
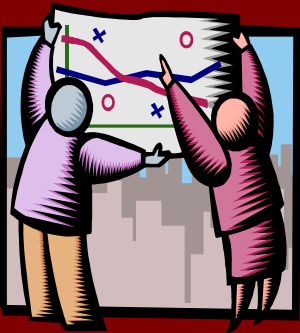"I don't understand what is expected of me."

Slide 4

Why do students struggle?
The problem is not illiteracy, but comprehension.
The bulk of struggling secondary readers can read, but cannot understand what they read.

~Reading Next

Slide 5

Rigor and Relevance in the 21st Century

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

Slide 6

Rigor: Bloom's taxonomy

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

### When can students start doing higher level thinking?

- You give the students a selection of familiar objects and ask them to classify them
- You scaffold / model the task, but they develop the classification independently
- They should be able to describe reasons for classification
- When adding a new object they can put in correct category or modify system to accommodate the new object

What's the earliest level that a student could design a classification system using familiar objects.

59%	1.	Ages 1-2
41%	2.	Ages 3-4
0%	3.	Kindergarten
0%	4.	Grade 1 - 2
0%	5.	Grade 3 - 4
0%	6.	Grade 5 - 6

Higher-level thinking skills

Complex use of knowledge
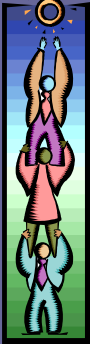
In School:
Teacher-directed

Defined tasks

In life:
Self-directed

Adaptable / fluid

Recall of knowledge

Justin, a second grader, talks about math

Justin

Math is when you add or subtract numbers. And your teacher will make sure you have the right answewr.

From: Math Is Language Too: Talking and Writing in the Mathematics Classroom Phyllis Whitin

Only right answers count.
Teachers tell you how to get those right answers.
You work by yourself to solve problems.

Question: A cruise ship carries 200 passengers and crew. Each life boat carries 30 passengers. How many lifeboats will the ship need?

Almost one-third of the 8th graders who took a NAEP math test answered

"6 remainder 20"
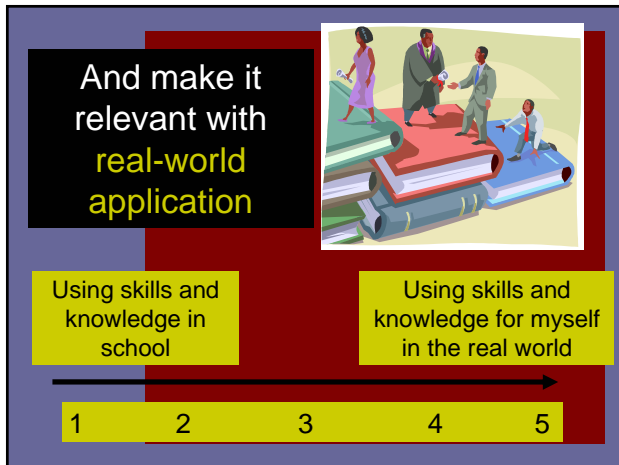
From a high school valedictorian:

"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.

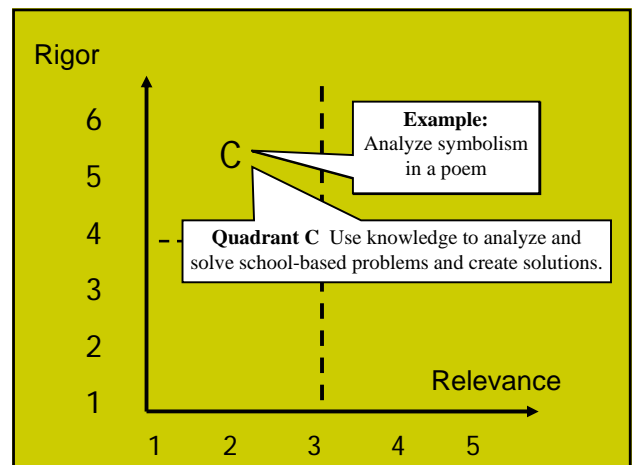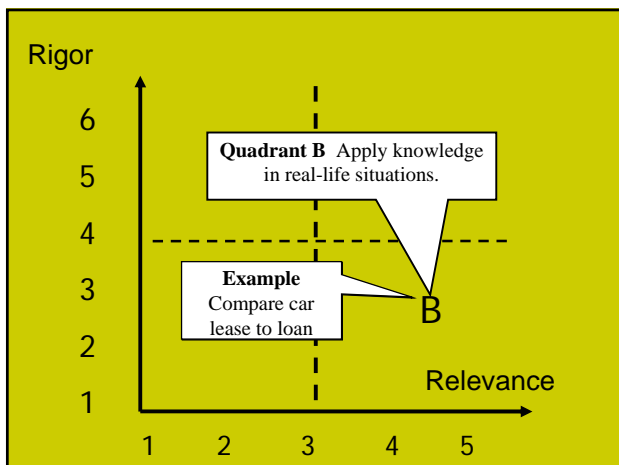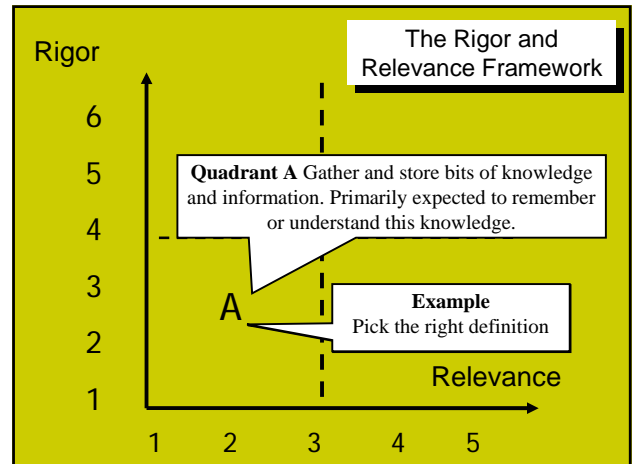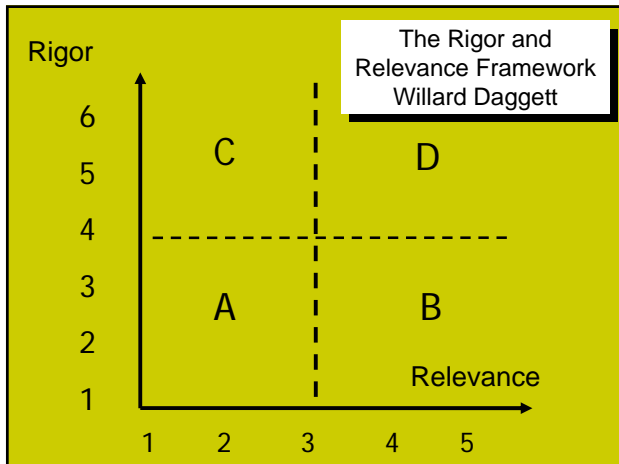I felt that **my brain was a way station for material** going in one ear and (after the test) out the other."

~ High School Student quoted in Wiggins and McTighe *Understanding by Design*

And make it relevant with **real-world application**

Using skills and knowledge in school

Using skills and knowledge for myself in the real world

1   2   3   4   5

Relevance

1. I understand how this information or skill has some application in life.

2. I have an opportunity to construct my own understanding rather than just learn "the facts."

3. In addition to learning content and skills, I am learning how to learn .

Rigor

6

5   C   D

4

3

2   A   B

1   Relevance

1   2   3   4   5

The Rigor and Relevance Framework
Willard Daggett

Rigor

6

5   **Quadrant A** Gather and store bits of knowledge and information. Primarily expected to remember or understand this knowledge.

4

3

2   A   **Example** Pick the right definition

1   Relevance

1   2   3   4   5

The Rigor and Relevance Framework

Rigor

6

5   **Quadrant B** Apply knowledge in real-life situations.

4

3   **Example** Compare car lease to loan

2   B

1   Relevance

1   2   3   4   5

Rigor

6

5   C   **Example:** Analyze symbolism in a poem

4   **Quadrant C** Use knowledge to analyze and solve school-based problems and create solutions.

3

2

1   Relevance

1   2   3   4   5

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by Peter Pappas ~ www.peterpappas.com

Quadrant D Apply knowledge and skills in complex ways to analyze and solve real problems and create solutions. Confront real-world unknowns.

Rigor

6
5
4
3
2
1

D

Example
Take part in a classroom role-playing debate

Relevance

1 2 3 4 5

Rigor

6
5
4
3
2
1

It's not just about "D"
- mix a variety of approaches

Relevance

1 2 3 4 5

Where do I think most lessons are taught?

Rigor
6
5
4
3
2
1
C   D
A   B
Relevance
1 2 3 4 5

85% A. Quadrant
15% B. Quadrant
0%   C. Quadrant
0%   D. Quadrant

Where do I think the teacher has to work the hardest?

Rigor
6
5
4
3
2
1
C   D
A   B
Relevance
1 2 3 4 5

You'll answer from four different perspectives:
   Preparing the lesson
   Teaching the lesson
   Managing the classroom
   Assessing the learning

The teacher has to work the hardest -
to prepare?

Rigor
6
5
4
3
2
1
C   D
A   B
Relevance
1 2 3 4 5

12% A. Quadrant
12% B. Quadrant
38% C. Quadrant
38% D. Quadrant

The teacher has to work the hardest -
to teach the lesson?

Rigor
6
5
4
3
2
1
C   D
A   B
Relevance
1 2 3 4 5

35% A. Quadrant
12% B. Quadrant
50% C. Quadrant
4%   D. Quadrant

---

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The teacher
has to work the
hardest -
to manage
students?

Rigor
6
5   C   D
4 - - - - - - - - -
3   A   B
2
1   Relevance
   1 2 3 4 5

46% A. Quadrant
0% B. Quadrant
8% C. Quadrant
46% D. Quadrant

The teacher
has to work the
hardest -
to evaluate
student progress?

Rigor
6
5   C   D
4 - - - - - - - - -
3   A   B
2
1   Relevance
   1 2 3 4 5

4% A. Quadrant
4% B. Quadrant
15% C. Quadrant
77% D. Quadrant

If the learning is student
centered… shouldn't they be
involved in assessing their
own progress?

Synthesis

What's special about Synthesis?

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

Grade 10 Standards ~ Synthesis
Examine Content and Structure

- **Synthesize and use information** from a variety of consumer and public documents to explain a situation or decision and to solve a problem
- **Synthesize the content from several sources** or works by a single author dealing with a single issue; paraphrase the ideas and **connect them to other sources and related topics** to demonstrate comprehension
- **Evaluate the logic, unity and consistency of text**, etc.....

Oregon ELA Standards

Bloom's Synthesis

Extended Application

The student will be able to **apply and extend** academic and career-related **knowledge and skills** in **new and complex or non-routine situations** appropriate to the student's personal, academic, and/or career interests and post-high school goals.

Evaluation

What's special about Evaluation?

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

Bloom's Evaluation

Collection of Evidence ~ Creating a Reflection

1. Which parts of your collection **give you the most pride? Why**?
2. As you completed your collection, what kinds of **challenges did you face**? **What did you learn** from those challenges?
3. How are the knowledge and skills you describe **relevant to your** education **plans** and post-high school **goals**?

Higher and lower order reflection

Evaluation

Synthesis

Analysis

I describe patterns, create my own connections, and assess my progress

– – – – – – – – – – – – – –

Application

Comprehension

I narrate what happened

Knowledge

Too many students see education as something that happens to them

- Externally - they fail to see its relevance in their lives
- Internally - they never understand how they learn nor develop the skills to monitor their progress

How do we create a
secondary program with
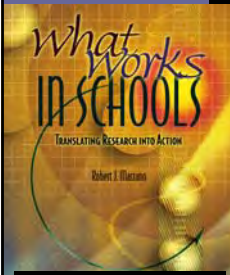reflection?

Bloom's Evaluation

A student reflects and evaluates:

1. I can judge if this information and these skills are appropriate to my goals.

2. I can appraise the merits of different strategies and problem solving approaches.

3. I evaluate my own progress as a learner.

You will need to purposefully connect students with their learning

1. **What** am I **learning** today?
2. **Why** am I learning it?
3. **How can I use** this knowledge and these skills to make a difference in my life?
4. **How** can I **work** with teachers and other students **to improve my learning**?
5. **How** am I **progressing** as a learner?

Robert Marzano:
What Works in Schools

Instructional strategies that work

"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

We'll focus on three strategies

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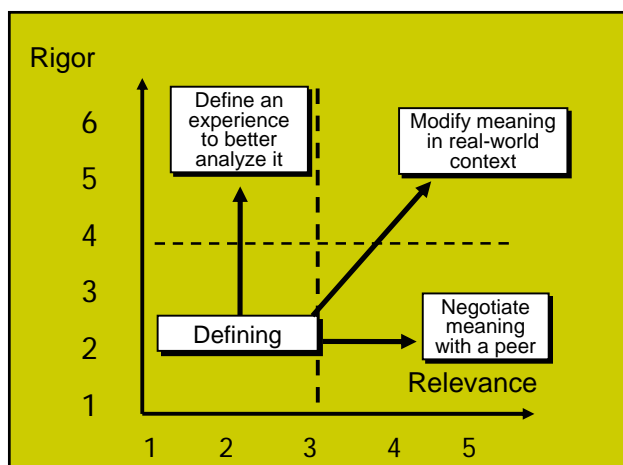3. **Comparing**: assessing similarities and differences

Reading Standards	
1. Direct, explicit comprehension instruction	X
2. Effective instructional principles embedded in content	X
3. Motivation and self-directed learning	X

Strategy #1:
Defining
negotiating meaning

What is this?

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by Peter Pappas ~ www.peterpappas.com

Slide 1

Rigor

Define an experience to better analyze it

Modify meaning in real-world context

Defining

Negotiate meaning with a peer

Relevance

6 5 4 3 2 1

1 2 3 4 5

Slide 2 — 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**

Slide 3

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

Slide 4 — Negotiating meaning: "Adultescent"

- Work in a small group to develop a definition for "Adultescent"
- Work together until you can agree on a definition
- Group roles
  - "Definers" (2 or 3 of you) discuss possible meaning
  - "Recorder" captures evolving meaning

Slide 5

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**.**

Adultescent

Slide 6 — 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
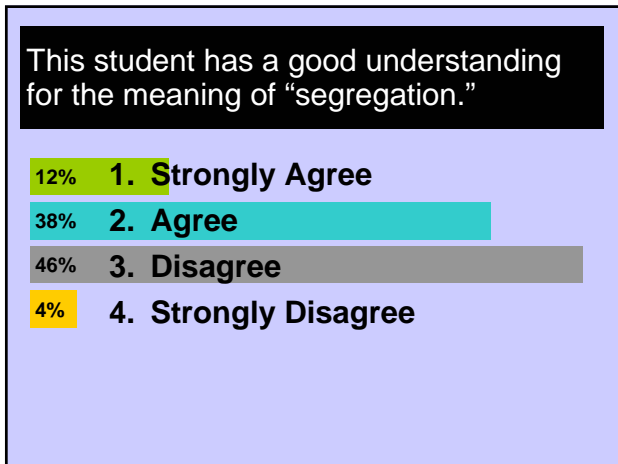
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Increase rigor and relevance with a personal vocabulary notebook

Term:

"My" definition:

Dictionary Definition:

Comparison:

Reading for Academic Success ~ Strong and Silver

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:

This student has a good understanding for the meaning of "segregation."

%	
12%	**1. Strongly Agree**
38%	**2. Agree**
46%	**3. Disagree**
4%	**4. Strongly Disagree**

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*

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 is** this specific context
- Ask them to **refine** their **preliminary definition** of the word
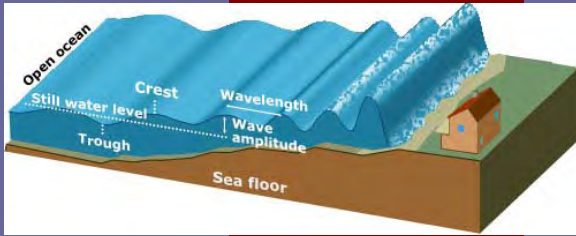

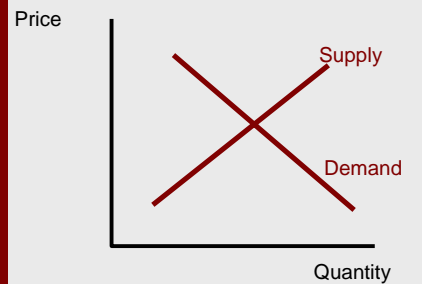Refining meaning in an academic discipline …
"Model"

Model of how a tsunami develops
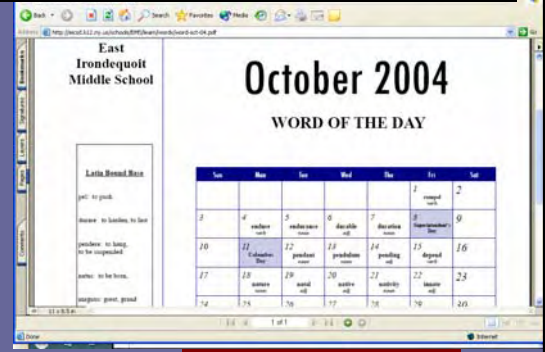

The supply and demand model

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.

Teamwork! Organize a school or department academic vocabulary list

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

by Peter Pappas ~ www.peterpappas.com

Defining with Rigor, Relevance and Reflection

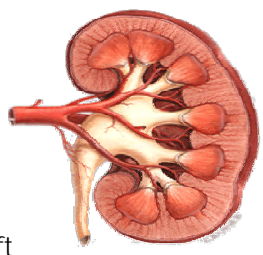Traveling Through the Human Body with ABCs

www.edteck.com/publish/

K is for Kidney

By~ Holly and Sarina

The kidneys separate waste from blood and turn it into urine. Most people have both a left and a right kidney.
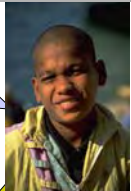
Kidney By~Holly and Sarina

The kidneys can relate to a pool filter because both of them separate the bad things from the good things. The pool filter empties the bugs and leaves from the water and the kidneys, they get rid of the bad things in your blood and turn it into liquid waste.
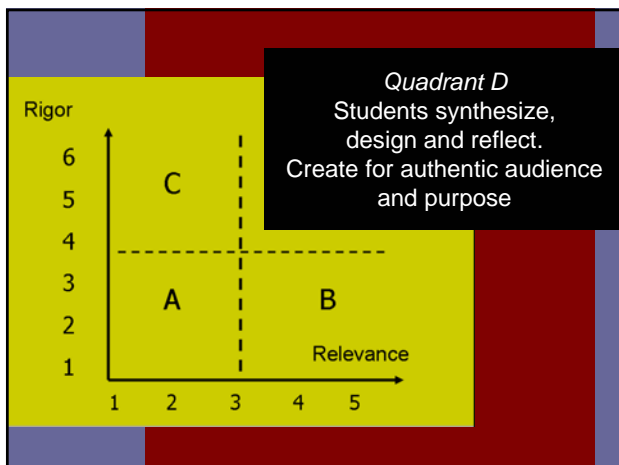
Pool filter

What process did you use to complete the project?

We **researched** our organ first. While doing this, we **took notes.** We then used these notes to **write a rough draft**, **revised** it and typed our PowerPoint. **We did all this together.**

Then we read everything over to see if everything **made sense to our audience**.

Quadrant D
Students synthesize, design and reflect. Create for authentic audience and purpose

Rigor

6
5   C
4
3
2   A   B
1   Relevance

1   2   3   4   5

www.edteck.com/publish

READ Think Write Publish!

Read > Think > Write > Publish
The power of publishing enables students to think like writers, to apply their learning strategies and to organize and express their learning
Literacy in the 21st century will mean the ability to find information, construct meaning, critically evaluate it, organize it and find meaningful ways to share it with others

Students at-risk for literacy need immersion in literacy tasks, reading and writing, that replicate the real world because they are the learners who lack the schema that defines literacy in the real world. Without publishing the student does not complete the writing process so they never rise above the level of "school work" to "real work." They never function as a writer. Literacy must be grounded in the real world to have value.

Publishing Workshops by
Patricia Martin, Suzanne Meyer and Peter Pappas

The Power of Publishing: Academic Success for Struggling Readers and Writers

by Peter Pappas ~ www.peterpappas.com

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*

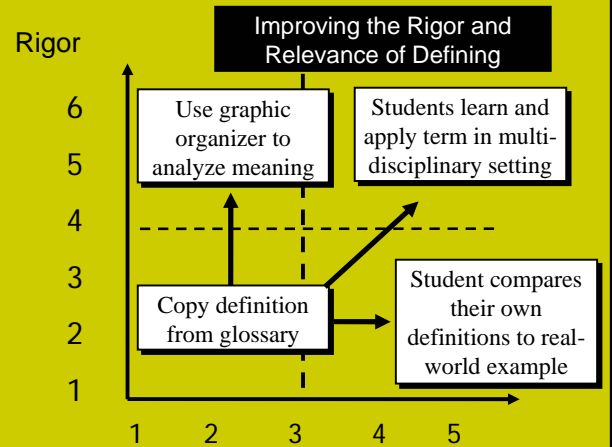**"My" definition:**　*A time when African-Americans used to have separate schools*

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*

Student Progress Chart　　　Unit 2
Student Name _____　　Date _____

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

Building Academic Vocabulary - Bob Marzano

Rigor

Improving the Rigor and Relevance of Defining

- 6
- 5 — Use graphic organizer to analyze meaning
- Students learn and apply term in multi-disciplinary setting
- 4
- 3
- 2 — Copy definition from glossary — Student compares their own definitions to real-world example
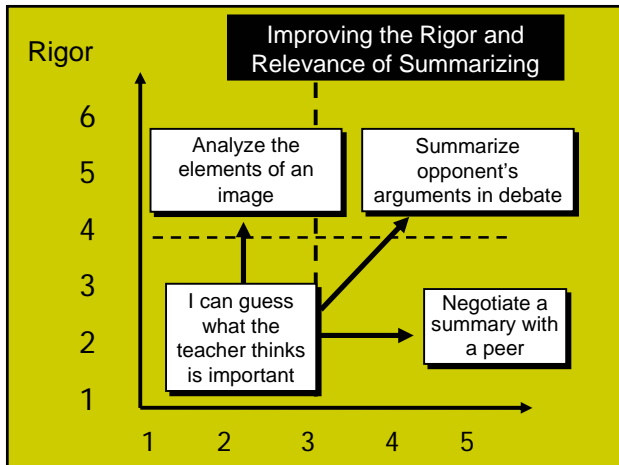- 1

1　2　3　4　5

Defining: A chance for reflection

1. How is the term is **related to previous subject matter** I have studied?
2. What's **something in my life** I can associate with the term?
3. How the term is **used in real-life situations?**
4. How has my **understanding** of the term **evolved?**

Strategy #2: Summarizing *synthesis and judgment*

What's important?

Rigor

Improving the Rigor and Relevance of Summarizing

6
5 — Analyze the elements of an image — Summarize opponent's arguments in debate
4
3
2 — I can guess what the teacher thinks is important — Negotiate a summary with a peer
1

1   2   3   4   5

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

---

Summarizing is an essential reading skill

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

Summarizing skills include:

- **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?

More summarizing skills

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

Which summarizing skills would be most challenging for your students
You can pick 2

0%	**1. Identify details**
15%	**2. Recognizing context**
15%	**3. Identify relationships**
9%	**4. Identify opinions**
20%	**5. Make predictions**
41%	**6. Infer meaning**

---

by Peter Pappas ~ www.peterpappas.com

Two essential components of teaching effective summarizing skills

1. Introduce material to be summarized – its structure and what students should expect to learn from it.
2. Allow them to make their own judgements about what is important. (Instead of simply asking them to repeat the details we've identified.)

**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 Kiniry

| 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

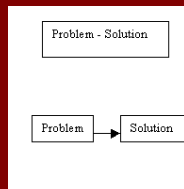**Description:** listing characteristics, features, and examples

Features

Topic
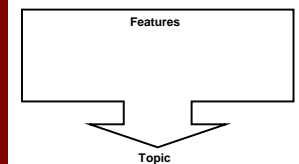
Comparison: how two or more things are alike or different
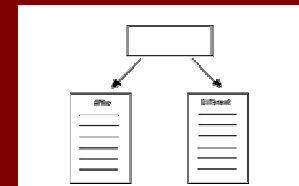
Cause and Effect: one or more causes and the resulting effect or effects
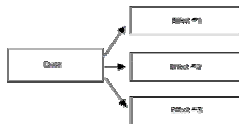
Cause
Effect #1
Effect #2
Effect #3

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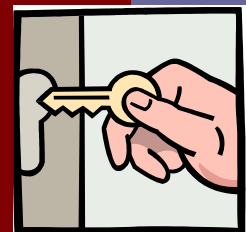
Problem - Solution

Problem → Solution

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:
   - **New vocabulary** that they will encounter
   - **Text features** – headings, bold face, images, data, graphs, footnotes
   - **Reading tips** – skim, make predictions, summarize, organize details, take notes

---

READING STRATEGIES FOR THE CONTENT AREAS

READING ASSIGNMENT PLANNING

Reading Assignment: _____

Purpose/Expected Results: _____

Vocabulary: _____

From Reading Strategies in the Content Areas
ASCD , 2003

Summarizing is an active task calling for more than accuracy

- Calls for active, **creative thinking** and writing.
- Engages student **judgment**.
- Works in **coordination with other strategies**.

Example: use a summary when making a comparison

Summarizing - synthesis and judgment

Which of these two images is a more significant artifact in the history of transportation?

From the Albert R. Stone Negative Collection, Rochester Museum & Science Center, Rochester, N.Y.

Which of these two images is a more significant artifact in the history of US transportation?

40% 1. Golden Spike

60% 2. Street scene

From the Albert R. Stone Negative Collection, Rochester Museum & Science Center, Rochester, N.Y.

Two essential components of teaching effective summarizing skills

1. Introduce material to be summarized – its structure and what students should expect to learn from it.
2. Allow them to make their own judgements about what is important. (Instead of simply asking them to repeat the details we've identified.)

---

by Peter Pappas ~ www.peterpappas.com

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

Getting the **visual message** right
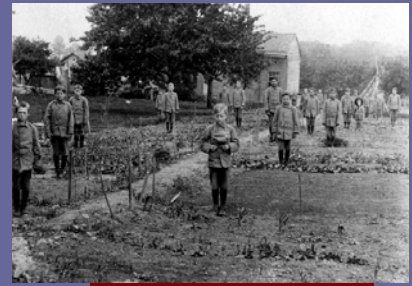
"So what the artist is saying is..."

Getting the **spoken message** right

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

Getting the **written message** right

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

Use images to teach how to summarize and use inference

- 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?

Differentiate the objective

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

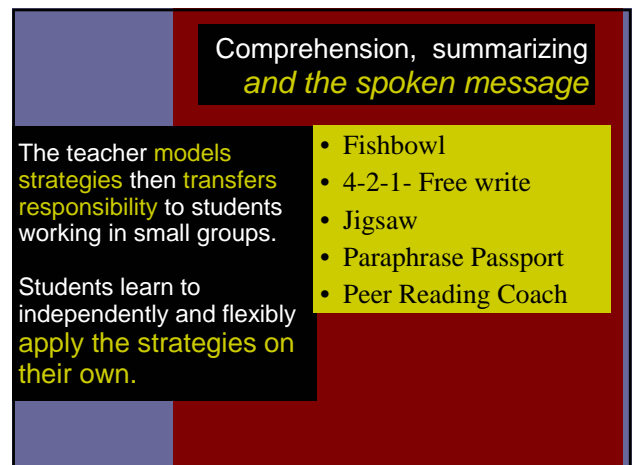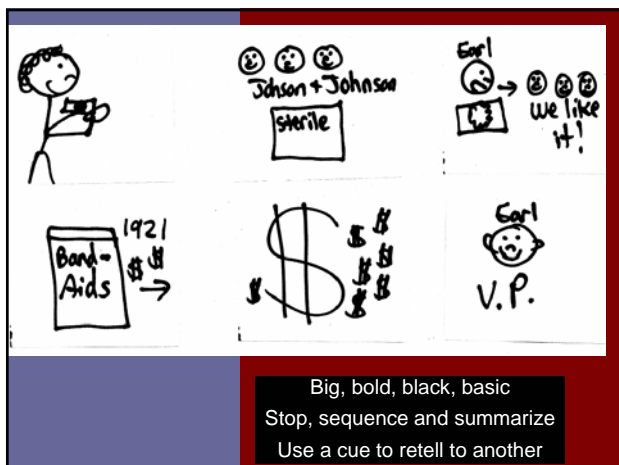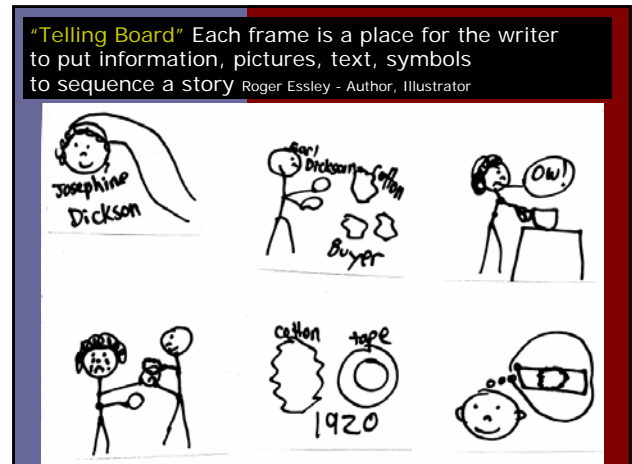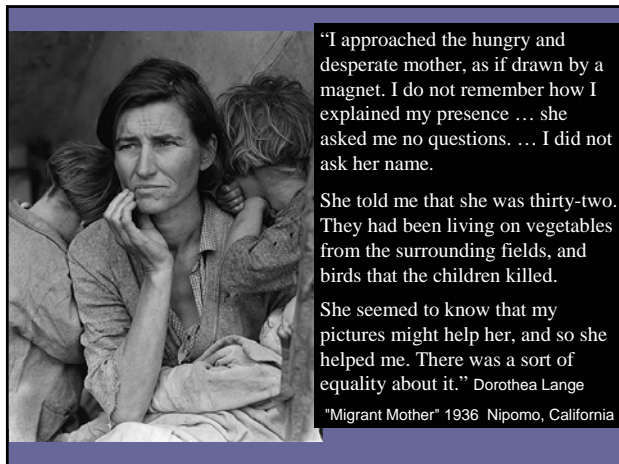Make it more rigorous and relevant with Evaluation

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

by Peter Pappas ~ www.peterpappas.com

Which photo would you select?

1. 46%
2. 17%
3. 38%
4. 0%

1

2

3

4

"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

"Telling Board" Each frame is a place for the writer to put information, pictures, text, symbols to sequence a story Roger Essley - Author, Illustrator

---

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

Comprehension, summarizing
and the spoken message

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.

- Fishbowl
- 4-2-1- Free write
- Jigsaw
- Paraphrase Passport
- Peer Reading Coach

---

by Peter Pappas ~ www.peterpappas.com

Our students would know how to participate in a "fishbowl" discussion group.

11% 1. **Strongly Agree**
11% 2. **Agree**
28% 3. **Disagree**
50% 4. **Strongly Disagree**

Effective questioners are also careful listeners – encourage students to think through original response to deepen understanding

- **Clarifying** - restate an idea in another way.
"What do you mean, when you say _____?
- **Verifying** - provide evidence or examples
"How do you know _____ ?"
- **Narrowing the focus** to limit the idea talked about.
"Tell us more about that idea."

Improving Comprehension, Jill Slack, SEDL Letter, June 2005

Peer Reading Coach Model

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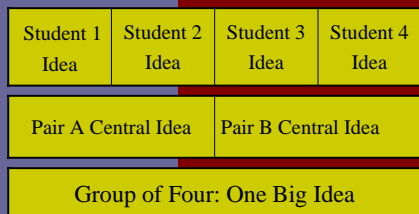- Switch roles with each paragraph to summarize entire reading

Reading for Academic Success ~ Strong and Silver

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*
  – *Key ideas we agree on with another group*

Reading for Academic Success ~ Strong and Silver

Increase relevance – 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: 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

Effective discussion groups
give students a chance
to learn by verbally rehearsing their thinking.

Learning happens during the work of
negotiating meaning.

The key is consistent structure and training
for discussion groups.

---

by Peter Pappas ~ www.peterpappas.com

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

Support summarizing skills with technology

Why Does St   Tell Us About the Origin of Our Solar System?
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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 from the solar nebula bumped into and stuck to one another, eventually forming the planets, moons, comets, and asteroids heavenly bodies as we know them today.

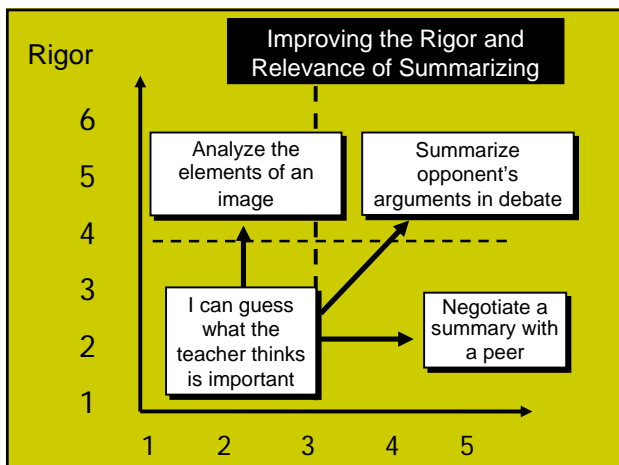*Tools / Track Changes / Highlight Changes*

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

Two essential components of teaching effective summarizing skills

1. Introduce material to be summarized – it's structure and what students should expect to learn from it.
2. Allow them to make their own judgements about what is important. (Instead of simply asking them to repeat the details we've identified.)

Improving the Rigor and Relevance of Summarizing

Rigor

6
5
4
3
2
1

1   2   3   4   5

Analyze the elements of an image

Summarize opponent's arguments in debate

I can guess what the teacher thinks is important

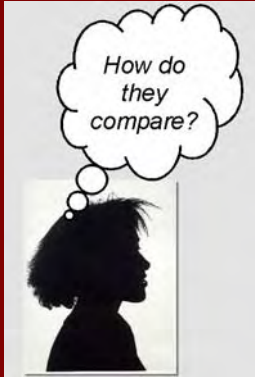Negotiate a summary with a peer

Summarizing: A chance for reflection

1. Is the summary **accurate**?
2. Did the summary **match audience / purpose**?
3. Did they use **my own words and style**?
4. What did **I learn** from the summarizing?

by Peter Pappas ~ www.peterpappas.com

Strategy #3:
Comparing /
Classifying
assessing similarities and differences

How do they compare?

We are always comparing

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

---

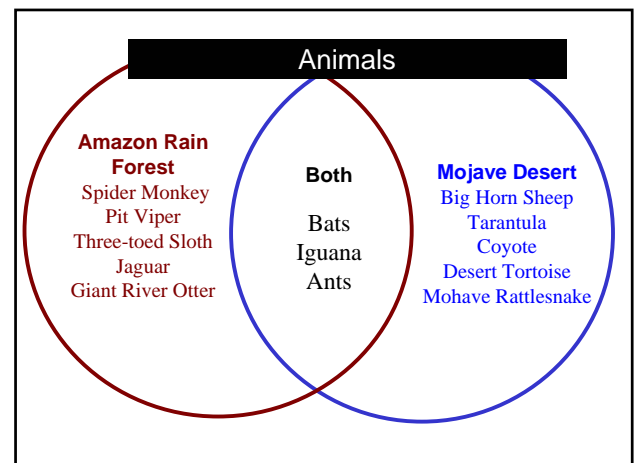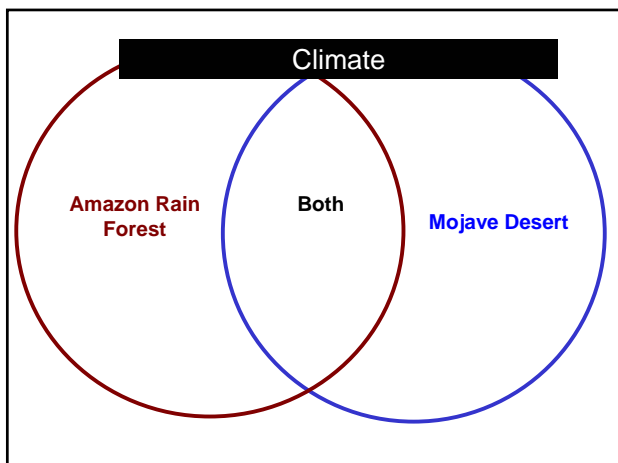*"Compare the animals and climate of the rain forest and desert."*

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
	High 119°F
Spider Monkey	
Pit Viper	Bats
Three-toed Sloth	Iguana
Jaguar	Ants
Giant River Otter	Big Horn Sheep
	Tarantula
Bats	Coyote
Iguana	Desert Tortoise
Ants	Mohave Rattlesnake

Classroom Instruction that Works, ASCD

Climate

Amazon Rain Forest   Both   Mohave Desert

Animals

Amazon Rain Forest
Spider Monkey
Pit Viper
Three-toed Sloth
Jaguar
Giant River Otter

Both
Bats
Iguana
Ants

Mojave Desert
Big Horn Sheep
Tarantula
Coyote
Desert Tortoise
Mohave Rattlesnake

---

by Peter Pappas ~ www.peterpappas.com

Where would you put this activity?

Rigor

6
5
4
3
2
1

C   D

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

A   B

Relevance

1   2   3   4   5

In which quadrant would you put this activity?

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

Rigor

6
5
4
3
2
1

C   D

A   B

Relevance

1   2   3   4   5

50%   A. Quadrant
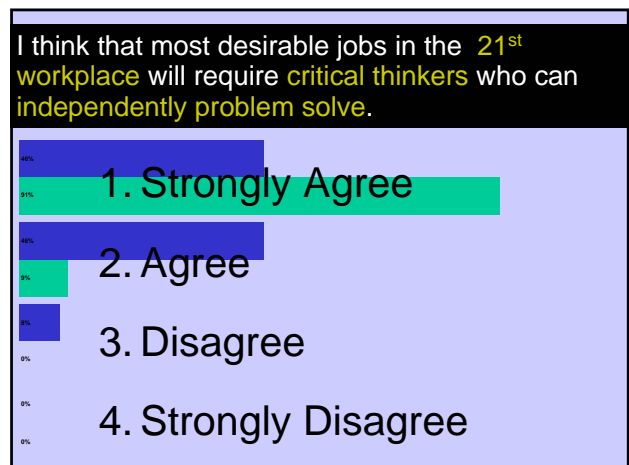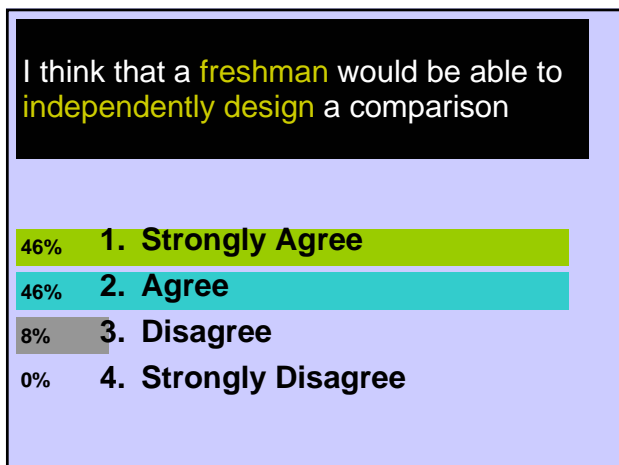8%   B. Quadrant
33%   C. Quadrant
8%   D. Quadrant

Who is doing the comparing in this exercise?
The teacher or the student?

1. Who **selected the information?**
2. Who **decided on the categories?**
3. Who **designed the graphic organizer?**
4. What's **the purpose** of the comparison? (What does it enable us to do or see?)

Is this **really an exercise in memorizing and repeating** information?

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.

I think that a freshman would be able to independently design a comparison

46%   1. **Strongly Agree**
46%   2. **Agree**
8%   3. **Disagree**
0%   4. **Strongly Disagree**

I think that most desirable jobs in the 21st workplace will require critical thinkers who can independently problem solve.

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

by Peter Pappas ~ www.peterpappas.com

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?**
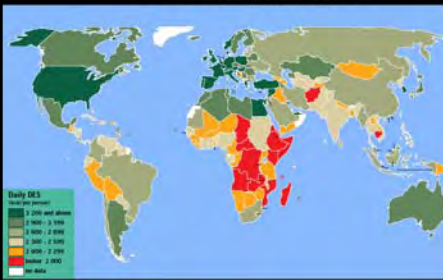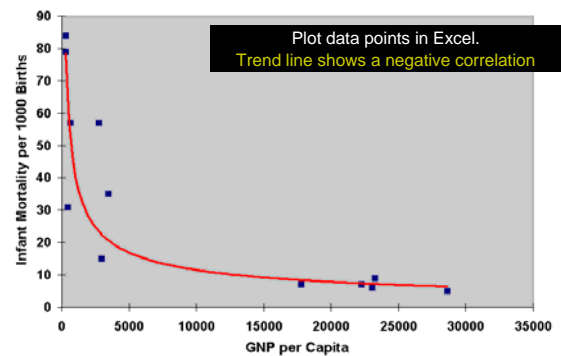
Add a peer review of research proposals
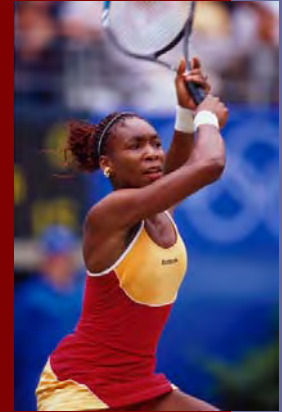
Conduct quantitative comparisons of real-world problems

What is the relationship between wealth and infant mortality?

MAPPING NUTRITION AND MALNUTRITION
Dietary Energy Supply (1994 -1996)

Wealth and Infant Mortality

Plot data points in Excel.
Trend line shows a negative correlation

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 things** 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.

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?

by Peter Pappas ~ www.peterpappas.com

"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.

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**?

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			

Make it relevant - **Choose an Mp3 Player**	Criteria		
	Cost	Battery	Memory
iPod			
Creative Zen			
Zune			

What criteria will you use?
Are they of equal importance?
How can your evaluations be quantified?

Two essential elements of comparing

1. Do we ask students to develop the comparison, or merely learn and repeat the comparison model that was presented to them?
2. Does the comparison serve as a catalyst for a deeper understanding of the material?

Comparing: a chance for reflection

- What information did compare?
- How did I structure the comparison?
- In what ways was the comparison useful to me?
- What did I learn from it?

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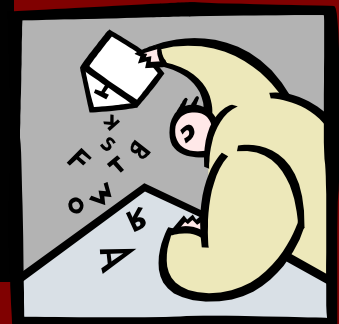
Literacy in the 21st century will mean the ability to
find information,
decode it,
critically evaluate it,
organize it into personal digital libraries
and find meaningful ways to share it with others. *David Warlick*

TIME
PERSON OF THE YEAR
You.

Life has become an open book test.

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

SPEED LIMIT C

Yet many schools function as if they still controlled the flow of information

What skills will the 21st century workplace require?

Literacy / numeracy

Self-discipline

Creativity

Adaptability – they must be independent learners

SPY STORY
A TALE OF MURDER, MISTRESS AND REVENGE
THE YEAR'S BEST PICTURES

TIME

How To Build a Student For the 21st Century

EXECUTIVE SUMMARY

TOUGH CHOICES OR TOUGH TIMES
THE REPORT OF THE *new* COMMISSION ON THE SKILLS OF THE AMERICAN WORKFORCE

"Creativity, innovation, and flexibility will not be the special province of an elite. It will be demanded of virtually everyone who is making a decent living."

Tough Choices or Tough Times: The Report of the New Commission on the Skills of the American Workforce by NCEE 2007

Tough Choices or Tough Times on
synthesis

"If someone can figure out the algorithm for a **routine job**, chances are that it is economic to **automate it**.

The best employers the world over will be **looking for the most competent, most creative and most innovative people** on the face of the earth and be willing to pay then top dollar for their services."
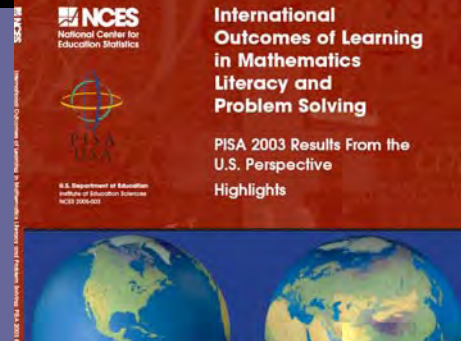
When do we stop modeling for the students and relinquish responsibility for their learning?

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, ….**

Program for International Student Assessment (PISA) is an assessment (begun in 2000) that focuses on 15-year-olds' capabilities in reading literacy, mathematics literacy, and science literacy.
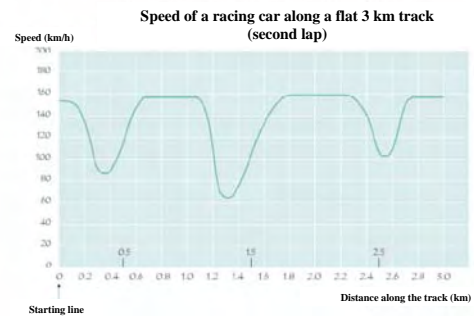
NCES
National Center for Education Statistics

International Outcomes of Learning in Mathematics Literacy and Problem Solving

PISA 2003 Results From the U.S. Perspective

Highlights

U.S. Department of Education
Institute of Education Sciences
NCES 2006-003

PISA USA

Countries participating in PISA 2003:

Assessed how well prepared students are for life beyond the classroom.

Focused on the application of knowledge and skills to **problems with a real-life context**.

From PISA *Math Literacy*

Speed of a racing car along a flat 3 km track (second lap)

Speed (km/h)

Starting line

Distance along the track (km)

Here are pictures of five tracks:

Along which one of these tracks was the car driven to produce the speed graph shown earlier?

S: Starting point
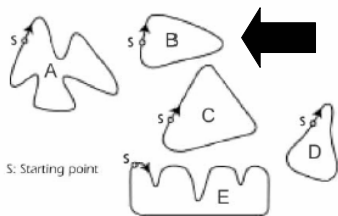
United States percent full credit: 23%
Top 5 Countries between 45-55%

PISA Defines Problem solving as:
...an individual's capacity to use cognitive processes to **confront and resolve real, cross-disciplinary situations where the solution is not immediately obvious.**
… and where the literacy domains or curricular areas that might be applicable are **not within a single domain of mathematics, science, or reading**.

---

by Peter Pappas ~ www.peterpappas.com

Resolve cross-disciplinary situations where the solution is not immediately obvious

"The Lincoln Children" 1845 American "primitive" by Susan Waters

Time for you to reflect,
and evaluate
the workshop.

The workshop successfully "modeled" an approach based on rigor, relevance and reflection.

61% **1. Strongly Agree**
39% **2. Agree**
0%   **3. Disagree**
0%   **4. Strongly Disagree**

The workshop gave practical strategies teachers can use in the classroom

71% **1. Strongly Agree**
29% **2. Agree**
0%   **3. Disagree**
0%   **4. Strongly Disagree**

The workshop was well-designed and effectively delivered.

81% **1. Strongly Agree**
19% **2. Agree**
0%   **3. Disagree**
0%   **4. Strongly Disagree**

by Peter Pappas ~ www.peterpappas.com

The setting (schedule, room, seating, etc) was conducive to a productive day.

- **36% 1. Strongly Agree**
- **60% 2. Agree**
- **4% 3. Disagree**
- **0% 4. Strongly Disagree**

The audience response system fostered discussion and engagement.

- **81% 1. Strongly Agree**
- **19% 2. Agree**
- **0% 3. Disagree**
- **0% 4. Strongly Disagree**