## WRITING TO READ & LEARN Across Content Areas

# Meeting Requirements of the CCSS Standards for Literacy



**Common Core Rollouts 2010** 

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Goals for Improving the Understanding of Informational Texts in ELA, Science & Social Studies

Walk away with several strategies that increase reading comprehension in subject areas
 Learn about what the new research reveals:

 Having students write about texts they read
 Teach students the writing skills that go into creating text
 Increase how much students write!



#### The Research

Examining the notion that—writing about text helps students make connections between what they know, read, understand and think (Carr 2002)

Graham & Hebert, 2010: Meta-analysis that provides evidence for how writing can improve reading



#### Writing To Learn

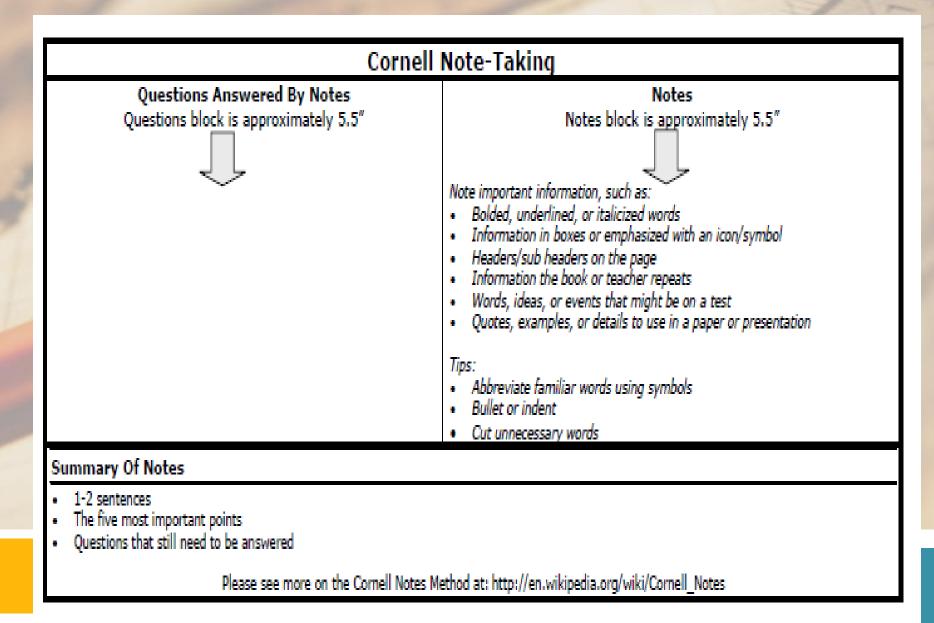
#### What is it?

A <u>Writing-to-Learn strategy</u> is one that teachers employ throughout and/or at the end of a lesson to engage students and develop big ideas and concepts.

- Requires higher-level thinking skills
- Focuses on ideas rather than correctness



## Column Notes: Cornell Notes



#### Example 1: T-Chart (Two Column Notes)

States of Matter

Note Taking	Note Making
States of matterphysical forms for substances. Solid, liquid, gas.	If water vapor is a gas, and I cannot see gases, then why can I see steam???
	I remember when we pretended to be atoms by bumping into each other in class. We moved faster when we pretended to be a gas.

Laboratory Investigation Log

Observations Made	Questions/Predictions
One plant in our room grew 3 centimeters more than the others this week and looks less green in color.	What might have caused this plant to grow differently than the others? I wonder if it was getting less light.

#### Example 2: Glossary of Important Terms and Concepts

Vocabulary Term	Explanation (In Own Words)	Examples And/Or Diagram
Photosynthesis		The starch in a potato The stored energy in seeds and grains

#### Additional Ideas For Column Headings:

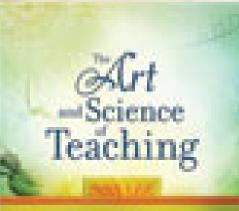
- What I Know/What I Wonder
- Topic/Details/Response
- Facts/Questions/Response
- Question/Answer

#### Modification:

- In lower grades teachers can use this same strategy with a class chart and/or class notebook. The teacher would record notes on the chart and then have students discuss with a partner. The teacher could then randomly select one person for reactions to record.
- Students can also record the notes that the teacher wrote on the chart/overhead on the left of their personal paper and then
  draw a description or reaction on the right.

#### **Column Notes**

Applying non-linguistic representations to summarizing and note-taking



MARZANO

(The Art and Science of Teaching, Robert Marzano, 2007)



Learning Goal: Gives notes focus. To gain a basic understanding of differentiated instruction (DI) and begin using techniques to meet the needs of all learners. Aid Existential Learners.

#### Key Questions Notes:

& Terms: Pre-lecture or reading. Students develop from learning goal.

What is DI?

How does DI address the needs of all learners?

How can I use DI in my classroom? From lecture or reading. Short & focused. Aid Verbal Linguistic Learners.

During lecture or reading. Pause for Think-Pair-Share.

Aid Interpersonal Learners.

<u>Graphic Representation</u>: Homework or ticket-out-the-door. Students must reprocess information. Aid Visual Learners.

Sample Notebook. *Multiple Intelligences* addressed in note taking. 2 column notes Facing page left blank

#### Summary: Homework.

Students must reprocess information. Higher order thinking. What do you feel about... Aid Intrapersonal Learners? Learning Goal: Describe how human body systems maintain relatively constant blood sugar (B2.3e). Gives notes focus.

Key Questions & Terms: Pre-lecture or reading. Students develop from learning goal.

How does the body respond to increased blood sugar levels?

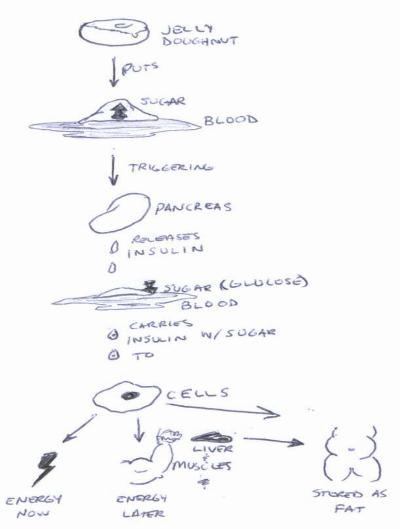
Insulin

Notes: From lecture or reading. Short & focused.

Insulin released from pancreas removes excess sugar (glucose) from blood.

Hormone that transports glucose from blood to cells

<u>Summary</u>: Homework Students must reprocess information. Higher order thinking. <u>Graphic Representation</u>: Homework or ticket-out-the-door. Students must reprocess information. Aid visual learners.



C(RAFT)S: Designing for Writing to Demonstrate Knowledge Activities

**Components:** 

- <u>C</u> CONTEXT (In the surroundings, what influences this piece?)
- **<u>R</u>** ROLE (Who is the writer?)
- **<u>A AUDIENCE (To whom is the writer writing?)</u>**
- **<u>F</u>** FORMAT (What format is used for the writing?)
- **<u>T</u> TOPIC (What are you writing about?)**
- **<u>S</u>** STRONG VERB (What is the purpose of the writing?)



## C(<u>RAFT</u>)S: Why is it important?

- Encourages students to focus on audience and voice
- Helps students apply content in authentic context
- Allows students to demonstrate understanding of targeted content
- Incorporates inquiry and research
  - Engages students in the type of higher order thinking that stimulates learning



#### **C(RAFT)S for Your Discipline**

#### **Template:**

You are a (<u>insert role</u>), in (<u>insert context</u>) writing to (<u>insert your audience</u>) in (<u>insert format of the</u> <u>communication</u>) to (<u>insert writing purpose using a</u> <u>strong verb</u>).

Now, create a product based on your template.



#### Argumentation...

...has its basis in:

CLAIM: A statement about the solution to a problem or answer to a question

EVIDENCE: Scientific data that supports the claim.

**REASONING:** A logical scientific argument that **explains** why the data counts as evidence in support of the claim.



## **C-E-R Example**

C-E-R: a strategy used when performing experiments and labs...

Consider you just performed a lab experiment where you mixed yellow and blue food coloring and the result was green food coloring.

Your CER may look something like this: Hypothesis: <u>If</u> I mix colors together, <u>then</u> a new color will result





## **C-E-R Example**

C: When yellow and blue are mixed together they make the color green

E: 10 ml of yellow food coloring was measured and mixed with 10 ml of blue food coloring which resulted (you ended up with) 20 ml of gren food coloring. Three identical tests were done and they all resulted in green.

R: Observations were used to see that when yellow and blue were mixed together they made green. The fact that the experiment was done 3 times means that it is reproducible and accurate. Two different colors when mixed together do make a new color.



#### **Objectives of Argumentation**

- Argumentation as a writing format (as described in WAC and CCSS) goes beyond C-E-R. It involves:
- Research on both positions of a controversial content area related issue
- Arguments and counter arguments
- Prioritization of arguments in order of importance
   Writing skills and process, as in any Writing to Demonstrate Knowledge performance
- Formal presentation of final product



#### Argumentation

#### Activity:

 Review information on Argument/Counter Argument
 Students will need to get a grasp on the vocabulary of reasoning and argumentation found throughout these examples

Note terminology of argumentation in next slide



## **Argumentation: Planning & Drafting**

- What position or claim will be developed? Take a stand.
- What grounds will convince the reader to agree with the claim? Give reasons why, data, evidence, and facts.
- What is the link (warrant) between grounds and claim? Explain the "reasons why" using conventional wording, e.g., since, given the data, if...then...
  - Is the <u>backing reliable</u>? Justify the reasons. This is reasonable because... (further explanation)



## **Argumentation: Planning & Drafting**

What are other possible views on this issue? Rebut the counterargument. Explain and refute other possibilities, e.g., Others might think...but...

Is a <u>qualification</u> necessary? Is the argument so solid that qualification based on extenuating circumstances is unneeded? Use conditional qualification, e.g., probably, presumably

Have I adequately summed up the case? Restate and summarize





## **Toulmin Graphic**

#### Writing Prompt:

Topic or Issue:	Purpose:	Audience:		
My CLEAR POSITION (thesis) on this issue:				
"Reasons" or WHY I take this position	EXAMPLES and EVIDENCE	"Warrant" HOW the reasons & examples support the position		
1.	1.	1.		
2.	2.	2.		
3.	3.	3.		

Most Significant Counterargument

Rebuttals to Counterarguments	

## **Critique of Written Argument/C-E-R**

- Is their explanation sufficient (it explains everything it needs to) and coherent (it is free from contradictions?)
- Did they use genuine evidence (they have data that shows a trend over time, a relationship between variables, or a difference between groups) and did they use enough evidence to support their ideas?
- Is their evidence high quality? In other words, is their evidence valid (they lused appropriate mewthods to gather the data) and reliable (they attempted to reduce error in their measurements or observations)?



#### **Critique of Written Argument/C-E-R**

- Is there any counter evidence that does not support their explanation?
- How well does their explanation fit with other theories and laws that are used to explain or describe how the world works?
- Is their rationale adequate (they explain why the evidence was used <u>and</u> why it supports the explanation) land appropriate (rational and sound)?



## Key Considerations for Implementation

 Balance writing between conveying experience, (narrative), explanation/information, and persuasion/argument.

- Emphasize textual evidence to support interpretation and analysis
  - Balance the use of literary and informational text.
- Emphasize integration and optimize readingwriting connections



## **Key Considerations**

- Up the ante on the level of text complexity that your students are reading. Provide strategies for guiding the quality of critical thought, discussion and reflection.
- Read multiple texts related to the same topic
   Ensure language-rich classrooms and learning experiences and master these skills according to progression



#### **Reflection and Discussion**

Using the Key Reflections and the questions below discuss and report out on the following by table group:

Which will you do immediately?
What will you initiate next—how and why?
How many will you have in place by next year.



#### **Online Resources**

Find <u>Writing Across the Curriculum</u> documents for English Language Arts, Science, Social Studies, and Mathematics at <u>www.michigan.gov/ela</u>

<u>Common Core State Standards for</u> <u>English Language Arts & Literacy in History/Social Studies,</u> <u>Science, and Technical Subjects</u>: <u>www.corestandards.org/assets/CCSSI\_ELA%20Standards.pdf</u>





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